THE ROLE OF GOVERNMENT IN AGRIBUSINESS ACTIVITIES IN DEVELOPING RURAL COMMUNITIES IN KENYA: A CASE STUDY OF SMALL SCALE DAIRY FARMERS IN GITHUNGURI SACCO LIMITED

BY

ESTHER MOKEIRA

UNITED STATES INTERNATIONAL UNIVERSITY – AFRICA

FALL 2014
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A Project Report Submitted to the Chandaria School of Business in Partial Fulfillment of the Requirement for the Degree of Masters in Business Administration (MBA)

UNITED STATES INTERNATIONAL UNIVERSITY – AFRICA

FALL 2014
STUDENT’S DECLARATION

I, the undersigned, declare that this is my original work and has not been submitted to any other college, ownership institution or university other than the United States International University in Nairobi for academic credit.

Signed: ___________________________   Date: ___________________________

Esther Mokeira Nyauma (ID 639536)

This project has been presented for examination with my approval as the appointed supervisor.

Signed: ___________________________   Date: ___________________________

Dr. Caren Ouma

Signed: ___________________________   Date: ___________________________

Dean, Chandaria School of Business
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ABSTRACT

The general economic trend in Kenya is quite worrying and there is need to shift focus to income generating projects that are more “rural-based”. Evidence shows that agriculture led growth in Kenya is more effective in reducing poverty than growth led by industry thus the need to boost small scale farmers productivity and enabling the growth of small enterprises in order to stimulate the rural economy. The purpose of the study was to investigate the role of the government in agribusiness activities in supporting small scale dairy farmers in rural communities in Kenya. The study thus sought to answer the following questions: in what ways does the government support small scale dairy farmers in rural communities in Kenya? To what extent does the support that government offers to small scale dairy farmers in Githunguri Kenya influence poverty reduction? What are the challenges facing the growth of small scale dairy farmers in Githunguri, Kenya?

This was a descriptive survey focusing on Githunguri SACCO Limited. The population of this study was farmers who are members of the SACCO. The population was 17,000 members of the SACCO. A stratified sampling technique was then used to select a sample size of 100 dairy farmers (70 male and 30 female). Primary data was collected using structured questionnaires. The questionnaires were checked for both validity and reliability using pilot study. The questionnaires were administered directly by the researcher through interviews. The collected data was analyzed using descriptive analysis with the aid of SPSS where data was coded and entered then analyzed using percentages, mean scores and standard deviations.

The study found that the government supports small scale dairy farmers by offering free AI services, pesticides at subsidized rates, fertilizers at subsidized rates, provision of agricultural extension officers, establishment of milk collection center, research and development to improve hybrid cattle, provision of affordable processing and marketing, and development of policies that allow the private sector to establish milk processing centers. The paper also found that the government was supportive in reducing poverty. This study also revealed that the farmers were faced with challenges which affected the attractiveness of the industry negatively thus collaboration between farmers and the government was necessary. The research concludes that there are various channels that the government can use to support the small scale dairy farmers in the country so as to ensure that small scale dairy farmers benefit from their efforts to the maximum level. The
paper also concludes that one of the ways that the government can use to combat poverty in the rural communities is through supporting agribusiness activities such as small scale dairy farming. In addition, the study further concludes that agribusiness activities such as small scale dairy farming are negatively influenced by various challenges which need to be addressed effectively so as to ensure farmers benefit from their activities.

The study recommends that the government and the small scale dairy farmers should come up with more effective ways of support in order to improve the performance of the sector. It is recommended that more studies should focus on establishing the effects of the various ways of government support on the growth of small scale dairy farming in the country. Another recommendation is that the government needs to develop more favorable policies to support the small scale dairy farming in rural areas so as to ensure poverty reduction. The paper also recommends that future studies should adopt regression analysis to establish the relationship between government support to small scale dairy farmers and poverty reduction in rural communities. Finally, the study recommends that the government and the farmers should come up with ways of combating these challenges for the purpose of reducing poverty and economic growth and development. This research further recommends that a comprehensive study of the challenges facing the small scale dairy industry in the country should be carried out on a larger scale.
ACKNOWLEDGEMENT

First, I am indebted to the Almighty God for the gift of life as well as a supportive family. Many a time I have been forced to abscond my duties as a mom but my family has always been understanding.

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DEDICATION

I dedicate this project to my lovely family.
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CHAPTER 1

1.0 INTRODUCTION
1.1 Background of the Problem

Agribusiness is a powerful tool of empowering the rural communities that enable communities to raise the living standards of living. The developed world realized greater heights of development when it sensitized rural folk to embrace agribusiness to curb rural–urban movement of population which carries with it a lot of labour and talent (FAO, 2008). Studies have also revealed that married and settled women tend to stay in rural areas where a lot of land is available. The demand for food and flora-cultural products can only keep rising. Experience has shown that the nature of crop and animal husbandry practiced in rural Kenya is devoid of any long-term gains since the main purpose of the agricultural activities is immediate consumption, (Diao, Breisinger, Thurlow, and Hassan, 2008).

The role of agriculture in sustainable development and poverty reduction for the vast majority of developing countries cannot be overemphasized by the fact that Forty-five percent of the developing world’s population lives in households involved in agriculture—and 27 percent in smallholder households—and most depend on agriculture for their livelihoods. The agricultural sector generates on average 29 percent of gross domestic product (GDP), employs 65 percent of the labor force in agriculture-based countries, and is key to generating overall growth. The growth strategy for most developing countries should focus on agricultural revitalization for several reasons, (Todaro and Smith, 2011). Agriculture will provide the largest source of employment in many countries and will remain the lead economic sector of comparative advantage. Moreover, agricultural productivity growth is the primary driver of global poverty reduction, by directly raising farmers’ incomes, as well as indirectly leading to the reduction of food prices. In fact, the potential of agricultural growth to reduce poverty is four times greater than the potential of growth from other economic sectors, (Cline, 2007).

One of the reasons for the growing awareness of agriculture’s critical role is the development community’s recognition that the agricultural sector has been ignored for many years. In Sub-Saharan Africa (SSA), where most crop yields have remained stagnant since the 1960s, efforts to bolster yields have been hampered by cuts in research
projects and aid programs such as fertilizer distribution. The biggest cutbacks from international donors affected a range of projects from research on pests and crops to programs educating farmers in improved methods and technologies, (Alunga and Murunga, 2013). Sustained annual agricultural productivity led to a reallocation of the focus and resources devoted to agriculture. After forgetting that food and therefore human survival are linked unequivocally to agriculture, the development community has rediscovered agriculture and is again making it a priority. Most donor governments and international organizations like the World Bank have increased funding dedicated to agriculture-related programs and better understand how to improve donor support to agriculture (World Bank 2007).

According to Harmer, Harvey and Odhiambo (2012), food assistance programs have represented the largest component of humanitarian assistance supported by donors in Kenya for many years; the recurrent failure of seasonal rains, high food prices, limited recovery time from previous droughts have led to chronic poverty and dependence on donor aid. The Kenyan government has failed in disaster management preparedness, thus Kenya has not gone below having one million people on food assistance in the past 12 years, Harmer et al. (2012). In May 2011, President Kibaki declared the drought a national disaster, the number of food insecure people in rural Kenya having significantly increased, Harmer et al. (2012). This food crisis calls for entrepreneurs to focus on agriculture as a solution to food shortages as well as cash in on this obviously profitable venture.

The cause of rural to urban migration can be attributed to search for better wages, education, better technologies, employment and better opportunities, crop failures and famine, inadequate social amenities and poor infrastructure in the rural areas, (Gimba and Kumshe, 2011). As a result, the pressure of urban housing has led to the emergence of slums and has also caused underdevelopment in the rural areas; the Government needs to develop the rural areas so as to decongest the urban areas, (Gimba and Kumshe, 2011). This can be through agribusiness. The eight Millennium Development Goals (MDGs) – which range from halving extreme poverty to halting the spread of HIV/AIDS and providing universal primary education, all by the target date of 2015, have enforced efforts to meet the needs of the world’s poorest, (un.org, 2013). There is a deliberate emphasis on poverty mitigation as well as improvement in the lives of slum dwellers,
This glaring gap on poor social well-being gives entrepreneurs an opportunity to capitalize on money making ventures.

Governments across the world can support agribusiness for rural development through building social capability for the local community to take up responsibilities for development after devolution of power, support producers lobby groups, support to improve market access and develop the agricultural exports further, improving negotiation capacity in international treaties, increase the Ministry of Agriculture’s capacity in policy analysis and legal personnel, support and accelerate legal reform, strengthen the management of coffee cooperatives by supporting and financing new management models, support of awareness campaigns to reduce HIV/AIDS infection and making available the retroviral drugs to those already affected. Others include:- support of an agricultural credit system that is operated in an MSE model, support development and multiplication of seeds and other planting materials because they are key to reducing costs of production, support technology development through encouraging the private sector and the dissemination of technical information particularly by encouraging participation of other providers, (Kibaara and Nyoro, 2002).

The Kenyan government has over the years supported agribusiness through the designing of policies that support the growth of the industry, giving subsidies to farmers, the provision of free artificial insemination services, provision of knowledge through agricultural extension officers as well as the provision of subsidized veterinary services. It is however important to note that some of these services such as free AI services are no longer available. These are some of the issues that the government needs to address in order to positively support the growth of agribusiness in the country for rural development and also the small scale dairy farmers in the country (Masika, 2012).

Increased poverty, lack of resources, unemployment among other economic indicators can be attributed to increased crime rates in an economy. Raphael and Winter-Ebmer(2001) have argued that unemployment is the main driving force behind the strong positive correlation between poverty and crime; high unemployment rates lead to social alienation and feelings of envy. The general economic trend in Kenya is quite worrying and there is a need to shift focus to income generating projects that are more “rural-based”. Evidence shows that agriculture led growth in Kenya is more effective in reducing poverty than growth led by industry thus the need to boost small scale farmers
productivity and enabling the growth of small enterprises in order to stimulate the rural economy (International Fund for Agricultural Development, 2013).

In their study, Nyang, Webo and Roothaert (2010) found that key elements in achieving sustainability of small farmer associations are good leadership, functional organization, democratic structures and a steady source of income. There are many challenges facing small scale farmers; lack of resources that limit their scope, poor planning and lack of business plans which makes it hard to grow beyond subsistence farming, lack of market information leading to exploitation by middlemen who short change the farmers, inability to effectively manage growth due to limited business knowledge, mixing business and personal finances, poor infrastructure that make it hard to access markets, to name just a few, (Nyang et al., 2010). Due to these challenges, it is important for entrepreneurs to come up with innovative solutions that will ensure the viability of agribusiness to these small scale farmers. Community development will ultimately translate to an overall improved economy (Meijerink and Roza, 2007).

Cavaye (2001) suggests that successful processes of community development involve not just funding, attracting new employers, or new infrastructure - passion, enthusiasm, commitment, small visible successes, inventiveness and cooperation collectively drive self-directed development; rather than leaving societal needs to the government or business sectors, entrepreneurs should find what is not working and solve the problem by changing the system, spreading the solution, and persuading entire societies to take new leaps. Kenya’s employment challenge is largely a youth challenge; the labour market is experiencing a shrinking formal sector employment that is unable to keep up with the youth bulge, (Omolo, 2012). The real possibility of having a formal job is through secondary or tertiary education–none of which guarantees employment, (Zepeda, Leigh, Ndirangu, Omollo and Wainaina, 2013). The youth should therefore focus on entrepreneurship with particular emphasis on agribusiness, since agriculture is the backbone of the Kenyan economy. With the right attitude and passion, the youth can easily come up with innovative solutions to the country’s food insecurity and poverty.

Africa still has a huge potential since most of its fertile land remains uncultivated; “If African farmers were to achieve the yields that farmers are attaining in other developed countries then output of staples would easily double or triple” (Alunga and Murunga, 2013). Furthermore, opening up cross border trade will boost the potential for greater
food production and contribute to food security, thus increasing returns to small scale farmers (Alunga and Murunga, 2013). Ministry of Youth Affairs and Sports, (2009) notes that programmes that encourage youth to invest in modern agriculture should be expanded as an income-generating alternative, particularly in rural areas since agriculture will remain the mainstay for a major part of the population for a long time to come.

Small scale dairy farmers in Githunguri just like all other small scale dairy farmers in the country are faced with decreasing government support in their activities following the liberalisation of the dairy sector in the country. Services which used to be provided for free by the government such as Artificial Insemination (AI) are no longer available and this forces these farmers to rely on the private sector which is expensive or on bulls which may not give hybrid offsprings (Alunga and Murunga, 2013). Liberalisation has also brought in competition in the industry where the private sector is mainly responsible for determining milk prices through market forces of supply and demand and this may hurt farmers sometimes. The unavailability of loans from government bodies is also another issue that faces small scale dairy farmers forcing them to rely on the private sector which is costly (Masika, 2012).

Githunguri SACCO Ltd is a well-established and fast growing Institution offering financial services to its members with an aim of improving their economic well-being. Members in the SACCO buy shares which are used as collateral for leveraged loans. This cooperative was formed in 1961, with a membership of 31, through state initiatives to help milk producers market their produce. Like other dairy cooperatives, its initial activity was to collect milk from members and sell to KCC. However, the liberalization of the sector saw the SACCO start a milk processing plant, (Wanyama, 2007). Currently membership stands at 17,000 farmers.

1.2 Statement of the Problem

A search for empirical literature on the role of agribusiness in developing rural communities revealed several studies. (Meijerink and Roza, 2007) evaluated the role of agribusiness on economic development. They note that agriculture is an important economic activity which leads to the development of the rural community. Tarawali (2013) evaluated the role that agricultural development can play in reducing poverty in Sub-Saharan Africa with a focus on Ghana. The study showed that agricultural development played a more superior role in poverty reduction than growth in any other
sector of the economy. Kibaara and Nyoro (2002) carried out a study to evaluate the relationship between agriculture and rural development in Kenya. Alunga and Murunga (2013) evaluated the gender roles and agribusiness in the Kenyan communities. (Masika, 2012) studied the marketing challenges facing small scale dairy farmers in Limuru. It is evident from the review carried out above that few studies have focused on studying the role of the government in supporting small scale dairy farmers in Githunguri to ensure poverty reduction and development of rural communities in Kenya. This is the gap that this study seeks to bridge.

1.3 Purpose of the Study

The purpose of the study was to investigate the role of the government in agribusiness activities in supporting small scale dairy farmers in rural communities in Kenya.

1.4 Research Questions

1.4.1 In what ways does the government support small scale dairy farmers in rural communities in Kenya?
1.4.2 To what extent does the support that the government offers to small scale dairy farmers in Githunguri Kenya influence poverty reduction?
1.4.3 What are the challenges facing the growth of small scale dairy farmers in Githunguri, Kenya?

1.5 Significance of the Study

1.5.1 The Government of Kenya

The Government will find it possible to assess and review its intervention efforts in youth unemployment. It will also discover more ways through which capacity building programs can be made more effective. Most importantly, it will be made aware of existing gaps in youth empowerment programs thus be able to correct these. The recommendations provide a basis upon which the government can intervene to help dairy farmers.

1.5.2 Management of SACCOs

The results of the study will be significant to the management of SACCOs as it will offer insight into the ways in which the government can support their farmers and they will therefore help their farmers take up these opportunities. As recommended, SACCOs are
able to lobby for the support of government on specific issues that have been recommended in order to help improve growth of the dairy sector.

1.5.3 Dairy Farmers

Farmers will be more empowered financially and be able to grow their farming beyond subsistence. They will appreciate agriculture and agribusiness more and no longer have the mentality of farming being a poor man’s job. As has been recommended, dairy farmers can see that there are great opportunities if the challenges can be addressed and they can therefore lobby the government to intervene.

1.5.4 Input Suppliers

The results of the study will be significant to the input suppliers to the farmers since they will give information on support from the government through things such as subsides and this would benefit them. As has been recommended that the government intervenes, the supplies can see that there are boundless opportunities in joining hands with the government to help provide inputs to the dairy farmers.

1.5.5 Academicians

The results of this study will be significant to academicians and researchers in the field of agribusiness and economics as they will get to know the relationship between the two and how this can be improved. Areas for further studies have been recommended and therefore researchers can pick from the recommended areas to do further studies.

1.6 Scope of the Study

The study focused on agribusiness initiatives currently taking place in rural Kenya and how these have influenced the development of the rural communities. The study focused on the support of the government to the small scale dairy farmers in Githunguri. The study focused on Githunguri Dairy Farmers SACCO so as to establish how the government supports the farmers and the influence that this has on economic development. The focus population was 17,000 members of the SACCO and was done between August 2014 and December 2014. The major limitations were resource constraints to cover a large sample of farmers and inaccessibility of some farmers during interviews.
1.7 Definition of Terms

1.7.1 Underemployment

This is a situation in which a worker is employed but his work hours and/or wages have been reduced without his request (Agency, 2014)

1.7.2 Working Poor

Shipler (2005) defines the working poor as individuals and families who maintain regular employment but remain in relative poverty due to low levels of pay and dependent expenses.

1.7.3 Youth Bulge

Youth bulge refers to a situation in which the population share of the 15-24 year olds exceeds 20 percent and the share of 0-14 year olds (children bulge which is a predictor of future youth bulge) is higher than 30 percent (Fuller, 1995). Societies characterized by a youth bulge while facing limited resources are prone to social unrests.

1.7.4 Agribusiness

Agribusiness refers to the business of agricultural production which includes agrichemicals, breeding, crop production (farming and contract farming), distribution, farm machinery, processing, and seed supply, as well as marketing and retail sales, (Ng and Siebert, 2009)

1.7.5 Small Scale Dairy Farmers

These are farmers who are involved in the long term rearing of cattle for the production of milk which will eventually be processed into other dairy products (Ng and Siebert, 2009).

1.7.6 Rural Communities

Rural Communities are groups of people who live in the rural areas where there are few homes or other buildings, and not very many people where agriculture is the main economic activity (Linna, 2011).

1.8 Chapter Summary

The chapter has attempted to give a background of the role of the government on agriculture in Kenya. The research problem has been stated and the purpose of the study
explained. Further, the chapter has provided the research questions which the present study addressed. The chapter also outlines the various stakeholders who will benefit from this study such as the government of Kenya, SACCOs, farmers, suppliers and academicians. The scope covered by the study is then explained followed by definition of terms used in the study. The next chapter is the literature review. This is followed by research methodology, findings, and conclusions.
CHAPTER 2

2.0 LITERATURE REVIEW

2.1 Introduction

This chapter presents the literature review. First, the chapter presents a review of how government supports small scale farmers in Kenya. Then, the chapter discusses the influence of government support on reducing poverty in Kenya. This is followed by a general review on the growth challenges farmers face. A summary of the chapter is then provided.

2.2 Government Support to Small Scale Farmers

2.2.1 Policy Development

Agriculture remains the backbone of the Kenyan economy. It is the single most important sector in the economy, contributing approximately 25% of the GDP, and employing 75% of the national labour force (Republic of Kenya 2005). Over 80% of the Kenyan population live in the rural areas and derive their livelihoods, directly or indirectly from agriculture. Given its importance, the performance of the sector is therefore reflected in the performance of the whole economy. The development of agriculture is also important for poverty reduction since most of the vulnerable groups like pastoralists, the landless, and subsistence farmers, also depend on agriculture as their main source of livelihoods. Growth in the sector is therefore expected to have a greater impact on a larger section of the population than any other sector. The development of the sector is therefore important for the development of the economy as a whole (Alila and Atieno, 2006).

The importance of the sector in the economy is reflected in the relationship between its performance and that of the key indicators like GDP and employment. Trends in the growth rates for agriculture, GDP and employment, show that the declining trend experienced in the sector’s growth especially in the 1990s, is reflected in the declines in employment and GDP as a whole. Policies that affect the performance of the sector have important implications for the economy. Policies for agriculture consist of government decisions that influence the level and stability of input and output prices, public investments affecting agricultural production, costs and revenues and allocation of resources. These policies affect agriculture either directly or indirectly. Improved agricultural production has been seen as one of the overall objectives for poverty
reduction in the country. The objectives of agricultural sector strategy have been increasing agricultural growth, seen as important for increasing rural incomes and ensuring equitable distribution. Due to limited availability of high potential land, it has been envisaged that increasing agricultural production will have to come from intensification of production through increased use of improved inputs, diversification especially from low to high value crops, commercialisation of smallholder agriculture, and increased value addition through stronger linkages with other sectors. In the following sections, we review some of the key policy issues and concerns with respect to the sector’s development (Alila and Atieno, 2006).

In Africa, most of the investments in agri-business are through private sector. To make agribusiness more vibrant there is the necessity to develop public-private partnership in one hand and private-private partnership in other hand. Because these partnerships creates more business opportunities and can be more benefit to all actors implies along the subsectors concerned. The government can support the growth of agribusiness in a country through the development, adoption and implementation of various conducive policies. These policies can be from the input stage to the marketing stage. Agricultural policy in Kenya revolves around the main goals of increasing productivity and income growth, especially for smallholders; enhanced food security and equity, emphasis on irrigation to introduce stability in agricultural output, commercialization and intensification of production especially among small scale farmers; appropriate and participatory policy formulation and environmental sustainability (Alila and Atieno, 2006). The key areas of policy concern, therefore, include:

- Increasing agricultural productivity and incomes, especially for small-holder farmers.
- Emphasis on irrigation to reduce over-reliance on rain-fed agriculture in the face of limited high potential agricultural land.
- Encouraging diversification into non-traditional agricultural commodities and value addition to reduce vulnerability.
- Enhancing the food security and a reduction in the number of those suffering from hunger and hence the achievement of MDGs.
- Encouraging private-sector-led development of the sector.
- Ensuring environmental sustainability.
2.2.2 Extension Services

A general consensus exists that extension services, if properly designed and implemented, improve agricultural productivity (Romani Mattia 2003, Evenson and Mwabu 1998; Bindlish and Evenson 1993; Birkhaeuser et al. 1991). The term “extension” is here understood to mean ‘advisory and other services’ that help rural families to make the best possible use of the productive resources at their disposal (Katz 2002). Agricultural extension services provide farmers with important information, such as patterns in crop prices, new seeds varieties, management practices with respect to crop cultivation and marketing, and training in new technologies. Extension services improve the knowledge base of farmers through a variety of means, such as demonstrations, model plots, specific training and group meetings. The exposure to such activities is solely intended to increase the ability of farmers to optimize the use of their resources and ultimately increase crops yields. In addition, ideal extension service provides feedback mechanism from the farmers to the research centers.

It has also been noted that even where technologies are relevant and available, smallholder farmers sometimes have no access to them (Fliegel, 1993). For this reason, extension systems and input distribution systems are mutually reinforcing – the contribution of extension to agricultural productivity growth depends on functioning input distribution systems and vice versa. Agricultural technologies are also rapidly changing. Farmers need to be made aware of what technologies work best, know how to use them, and generate effective demand for viable new technologies to provide signals to input distribution system to supply them (Davidson et al 2001).

The government also supports dairy farmers during the production process by offering agricultural extension officers and veterinary officers to take care of their animals at a small and affordable price. They guide farmers on the type of foods to use as well as the type of pesticides and other form of medicine to use on the animals to maintain good health. This ensures that these cows are healthy and thus are able to produce the highest quality and quantity of milk. Another way of support is training the dairy farmers on how to harvest and store their milk in a clean environment in order to ensure it does not spoil. The government through KCC has established various milk collection centers in areas where there is high dairy milk production and this helps them to preserve the farmers’ milk in a pasteurized environment and thus prevent it from going bad. KCC also helps
farmers to market their milk thus ensuring a ready market for them. The government has also come up with economic policies which enable the private sector to engage in the business of collecting, processing and distributing milk. This has helped farmers to market their milk at a small fee and thus get maximum benefits from their production (Masika, 2012).

For example in Kenya, the government over the years supported agricultural activities such as investment in research, extension and use of improved inputs (fertilizers, seeds and chemicals) (Wagacha and Ngugi, 1999). The government is today providing farm inputs such as seeds and fertilizer at subsidized prices as a way of ensuring farmers are able to acquire planting seeds. In the dairy sector the government has been providing artificial insemination (AI) services for free to farmers in order to help them improve the quality of their herds for better production of milk.

2.2.3 Research and Development

The government can also support the growth of agriculture in general and agribusiness through establishing research bodies to support innovation in terms of new crops, pesticides, other farm inputs as well as farm machinery. The government of Kenya is at the forefront of supporting agriculture through research institutions like KARI (Kenya Agricultural Research Institute). International Agricultural Research Centres (IARCs) provide significant research-based inputs to the development of the agricultural sector. Three have their global HQs in Kenya—the World Agro forestry Centre (ICRAF), the International Livestock Research Institute (ILRI), and the International Centre for Insect Physiology and Ecology (ICIPE). Several others have major national and/or regional programmes based in the country, including CIMMYT (maize and wheat improvement), ICRISAT (dry area crops), TSBF / CIAT (soil biology and fertility improvement), IPGRI (plant genetic resources), and CIP (potatoes and other tuber/root crops). Although there is a danger of overlap among them, the IARCs work to ensure a common, regional plan and strategy for the centres’ work in East and Southern Africa (see ‘CGIAR, 2007. CGIAR Regional Plan for Collective Action in Eastern & Southern Africa, 2007–2009, Alliance of the CGIAR Centres).

Other important players include universities with programmes in agriculture, e.g. University of Nairobi, Jomo Kenyatta University of Agriculture and Technology (JKUAT) and Egerton University; as well as research institutions like the Kenya
Agricultural Research Institute (KARI), the Kenya Marine and Fisheries Research Institute (KEMFRI), and the Kenya Forestry Research Institute (KEFRI); the Coffee, Tea and Sugar Research Foundations. Finally, there are several specialized policy research institutions that are linked to Government institutions to help analyse trends in the agricultural sector. They include the Tegemeo Institute (Egerton University) and the Kenya Institute for Public Policy Research and Analysis (KIPPRA, linked to the Ministry of Planning) and the privately managed Institute of Public Policy and Research.

2.2.4 Financial Support

Other ways of supporting the growth in agribusiness include the offering of agricultural loans through government finance bodies such as Agricultural Finance Corporation (AFC), partnerships with the private sector to offer subsidized agricultural loans through micro finance institutions as well as the promotion of teaching of agriculture as a subject both in primary and secondary schools. Another very effective way of promoting agribusiness is through the ASK shows that the government hosts in various venues across the country to showcase various innovations in the field of agriculture (Mabaso, Pauw, and Benin, 2012). Farmers take their animals to the show to showcase their work and other small scale farmers can use this opportunity to learn about the best practices in dairy farming and thus improve their milk yields.

2.3 Influence of Government Support on Poverty Reduction

2.3.1 Governments’ Poverty Reduction Initiatives

The government of Kenya has over the years initiated several anti-poverty policies. Immediately after independence, the government identified poverty, diseases and illiteracy as the major hindrance to human development (Sessional Paper No. 10 of 1965). Consequently, various development plans, Poverty Reduction Strategy Papers (PRSP), Participatory Poverty Assessment Reports (PPAR), National Poverty Eradication Plan (NPEP), District Focus for Rural Development (DRFD), Mid-Term Expenditure Frame Work (MTEF), Millennium Development Goals (MDGs), and Vision 2030 have spelt out the strategies and policies to fight poverty. The government has since established the causes, constraints and the processes that engender and entrench poverty. Despite these positive developments, poverty alleviation has remained elusive in the country (Nyamboga, Nyamweya, Sisia, and Gongera, 2014).
Poor economic performance has resulted in absolute poverty whereby a large population goes without adequate food; education, health facilities, safe water and decent housing. This has been blamed on poor policy formulation, initiation, planning and implementation of poverty alleviation programs. The PPARs have broadened perceptions of the poor on the phenomenon of poverty. Studies conducted show that the poor have been excluded in formulating policies aimed at alleviating poverty. The poor have been for long reduced to passive participants in their own development; reducing their ownership of poverty alleviation programs. They are not involved in formulating the policies and identifying the specific projects that will raise the level of development. Consequently they are not adequately represented in various policy-making organs and institutions fighting poverty at the grassroots (Omiti, et al 2002).

The role of agriculture in a growing economy where majority of the poor employed by this sector are located in the rural areas cannot be underestimated. Agriculture and industry occupy very strategic positions in the development process of developing economies like Kenya. This is because industrialization is assigned a leading role in the development of such developing economies. This is in terms of its provision of employment and income; diversification of the economy and export, improvement of balance of payment; diffusion of technical and managerial skills in an agrarian economy like Kenya’s, this can only be feasible with the impetus and complementary role of the agricultural sector (Tersoo, 2013).

On the other hand, agriculture which is the dominant sector of a developing economy employs two third of the poor located in the rural sector. It therefore needs a boost towards rapid development and productivity in a linkage with the industry. The symbiotic link between these two sectors is born out of the desire to foist an integrated production structure, thereby employing the surplus labour from agriculture as well as creation of backward integration and forward linkages. The position of agriculture as a catalyst to industrialization produces a synergy derived from the agro-industrial theory which emphasizes congruence between agriculture and industry. This theory identifies three major contributions of agriculture in industrialization which include: increased production of food, supply of raw materials and provision of capital flow and expanded market for the manufacturing industry. These are couched in factor, production and market contributions (James Investment Research, 2005).
The centrality of agribusiness in the interface between agriculture, and the rural sector cannot be easily waved aside. This is because agribusiness has the capacity to provide greater employment, higher incomes, poverty reduction and provision of Corporate Social Responsibility (CSR) via their requisite infrastructure. It does provide inputs to farmers and connects them to the consumers via general handling, processing, transport, marketing, and distribution of agricultural products. The synergy between agribusiness and agro-industrial linkage (commercial activities) is a great potential for development of the poor rural majority in Kenya, (Stanton, 2000).

2.3.2 Influence on Poverty Level

Earlier literature stressed the direct impact on poverty reduction that comes from rising rural wages and incomes. Most of the world’s poor live in rural areas, or migrated from them in search of better opportunities. It seems almost obvious that growth in agricultural productivity is the surest way to end poverty. The historical evidence confirms this logic. Growth in agricultural productivity not only can increase farm incomes, it also stimulates linkages to the non-farm rural economy, causing economic growth and rapid poverty reduction, with overall growth multipliers almost always significantly greater than one (Haggblade, Hazell, & Reardon, 1993).

Agribusiness is a concept that became popular in the early sixties. It arose along with recognition of the agro-processing sector as a new emerging sector. According to (Davis, 1956), agribusiness is the sum total of all the operations involved in the manufacture and distribution of farm supplies, production operations on the farm and the strong processing-distribution of commodities and items. (Davis, 1956), view agribusiness as dividing the structural components of the production process into substructures which are capable of being administered integrative. Three substructures of this sector are the input; farm productions and the marketing section for processed products. This concept implies the process by which corporate firms supply agricultural inputs or purchase farm outputs and process them for onward distribution in an integrated pattern. Agribusiness is grouped into three primary tri-aggregates: (i) farm supply (ii) farm production (iii) processing distribution.

From the foregoing, it can be juxtaposed that, there is a synergy in the agribusiness – rural development nexus through inputs supplies, processing and distribution that that characterize its development. On the other hand, agribusiness provides the much
employment and food for the abundant rural labour force, expands the market, increases the incomes of those involved in the supply components processing and distribution of agro-industrial products. The intrinsic value of agribusiness is that, it constitutes a synergy of agro-industrial linkage and in the nutshell, involved in the production and distribution of food and fiber needs of the economy. It therefore generates backward integration and forward linkages, thereby facilitating the release of workers from the farm to other sections of the tri-aggregates. This synergy is an interesting option for industrialization. Such a process is expected to transform agriculture and at the same time create new industrial jobs and incomes (Timmer, 2005).

According to Olayida and Heady (1982), the farm supply and production components are very important but they depend on such infrastructural facilities like land, labour capability, water and management. The nature and character of agribusiness can best be assessed by the kind of synergies that exist between agriculture, and the non-farm sector. From the FLO (2007) and WDR (2008) have it that recent trends have shown a rapid increase in the production value adding chain through agribusiness related opportunities which impact greatly on poverty alleviation because it is expected that, agribusiness can spur agricultural growth thereby engendering a strong link with the smallholders that can consequently reduce rural poverty.

(Grewal, Grunfeld, & Sheehan, 2012)note that the importance of agriculture in poverty reduction derives from two basic circumstances: (a) the incidence of poverty is disproportionately high in developing countries, which still rely heavily on agriculture for output and employment; and (b) as the poorest households also have few assets and no skills, they typically rely more on agriculture, and generally face many obstacles in connecting with the non-agricultural economy for income and employment. As a result, poverty in developing countries is primarily rural, as nearly 72% of those in poverty in these countries live in rural areas (IFAD 2010). In Sub-Saharan Africa the figure is 75% and in South Asia it is more than 80%. Social and economic exclusion further reduces alternative opportunities that may be open to certain minority groups, including women, youth, ethnic minorities and Indigenous people. Thus, by providing a greater share in employment of the poor and the unskilled workforce, agriculture plays, either directly or indirectly, a crucial role in making economic growth more pro-poor, (Todaro & Smith, 2011).
The impact of agriculture on poverty reduction depends on the interaction of several effects. First of all, the direct effect of growth in the agriculture sector is to raise the income levels of those employed in this sector. Many poor people have a marginal attachment to employment in agriculture, and growth in the sector will provide them with more substantial and/or better remunerated employment. Second, how much the poor people benefit from agricultural growth depends on the rate and nature of their participation in agriculture. This remains high in many developing countries, but can vary, depending, for example, on the type of agriculture or the ownership structure in a particular location. In India, for instance, rapid growth rates in livestock agriculture have contributed to poverty reduction because of the high labour intensity of this subsector. Third, growth in agricultural incomes generally will provide increased demand for both rural and urban services in surrounding areas, some of which (e.g. construction, transport and personal services) can be provided by poor people, (Thirtle, Irz, Lin, & Wiggins, 2001).

Tarawali (2013), notes that, the government plays a critical role of ensuring that poverty levels in the rural communities are reduced through supporting various agricultural initiatives such as small scale dairy farming. Government support through incentives such as subsidies, artificial insemination, agricultural extension services and subsidized veterinary services is also very effective in promoting the growth of agribusiness in general and small scale dairy farming in particular. (Masika, 2012)also notes that the support of the government in the marketing of milk is very critical in the success of small scale dairy farmers. This support ensures that farmers sell their milk at better prices which in turn leads to higher incomes and thus poverty reduction.

2.4 Challenges Facing the Growth of Small Scale Farmers

2.4.1 The Challenges

Kenya’s agriculture is mainly rain-fed and is entirely dependent on the bimodal rainfall in most parts of the country. A large proportion of the country, accounting for more than 80 per cent, is semi-arid and arid with an annual rainfall average of 400 mm. Droughts are frequent and crops fail in one out of every three seasons. Kenya’s agriculture is predominantly small-scale farming mainly in the high-potential areas. Production is carried out on farms averaging 0.2–3 ha, mostly on a commercial basis. This small-scale production accounts for 75 per cent of the total agricultural output and 70 per cent of
marketed agricultural produce. These facts about Kenyan agriculture sector show a number of challenges to the sector (Odhiambo et al., 2004). The effects of climate change have been felt mostly by the farmers especially due to dependence on rain-fed agriculture. The changing and unpredictable raining seasons has greatly affected their ability to plan their farming activities. Areas which received adequate rainfall now receive insufficient rainfall reducing the land that can support agriculture. This brings the need for more exploitation on irrigation farming especially in arid and semi-arid areas. It is estimated that intensified irrigation can increase agricultural productivity fourfold and, depending on the crops, incomes can be multiplied 10 times. This has also affected the availability of animal feeds due to lack of enough rainfall making it hard for small scale farmers to feed their cattle thus lower milk production (Thurlow et al, 2007).

The agricultural sector extension service plays a key role in disseminating knowledge, technologies and agricultural information, and in linking farmers with other actors in the economy. The extension service is one of the critical change agents required in transforming subsistence farming to a modern and commercial agriculture to promote household food security, improve income and reduce poverty. However there is limited access to extension services in most parts of the country with the National extension staff: farmer ratio standing at 1:1,500. This situation has hindered most farmers from keeping pace with changing technological advances. There is therefore need for recruitment of more extension staff and the involvement of Non-Governmental Organizations to increase access of extension services to dairy farmers (Irungu, Ndirangu and Omiti, 2009).

The rising population density has contributed to the subdivision of land to uneconomically small units. In addition, the reduction of fallow periods and continuous cultivation has led to rapid depletion of soil nutrients, declining yields and environmental degradation. These farmers need information on the right farming practices such as the right feeds, chemicals to use for their animals as well as the right insemination practices for hybrid offspring. It is also important for small scare farmers to be provided with information on the best zero grazing practices so as to maximize their output. This can be provided by extension and advisory services. Poor rural roads and other key physical infrastructure have led to high transportation costs for agricultural inputs and products. It also leads to spoilage of perishable commodities such as milk during transportation. This causes high losses to farmers (Thurlow et al, 2007).
Pests and diseases have continued to cause a lot of losses to farmers. This is caused by lack of information by the farmers on how to control these diseases. Post-harvest losses are caused by poor handling and storage facilities where for example milk may spoil if it is stored in unclean containers or in warm temperatures before it can be transported to the processing facilities or sold to users. Extension services can be instrumental in helping reducing harvest losses caused by the above. Most farmers lack information on the right type of farm inputs to use and the appropriate time of application of the same. The cost of key inputs such as pesticides, fertilizer, drugs and vaccines is high for resource-poor farmers. Most farmers therefore do not use them. This greatly reduces the yield that the farmers get (Mabiso et al., 2012).

Although Kenya has a well-developed agricultural research system, use of modern science and technology in agricultural production is still limited. Inadequate research–extension–farmer linkages to facilitate demand-driven research and increased use of improved technologies continue to constrain efforts to increase agricultural productivity as farmers continue to use outdated and ineffective technologies. This brings the need of extension services that can link research and the farmers (Odhiambo et al., 2004). These challenges have over the years negatively impacted on the ability of agribusiness to influence the development of rural communities in Kenya.

2.4.2 Government Interventions in Dairy Industry

The Kenyan government over the past decade has recognized the challenges facing the dairy industry. With the support from the private sector and donor agencies, various interventions have been spearheaded with the intention of analyzing the factors constraining the competitiveness of smallholder dairy farmers and policies and institutions affecting the dairy sub-sector, among others. These interventions include: the Smallholder Dairy Project jointly implemented by the Ministry of Livestock Development (MoLD), the Kenya Agricultural Research Institute (KARI) and the International Livestock Research Institute (ILRI), with primary funding from the UK Department for International Development (DFID); the USAID (United States Agency for International Development) Kenya Dairy Sector Competitiveness Program (KDSCP) which is a 5-year effort to improve Kenya’s dairy industry competitiveness, and implemented by LandO’Lakes, Inc., with financial and technical support from USAID; IFAD funded Smallholder Dairy Commercialization Programme (SDCP) which is
implemented by the Ministry of Livestock Development; East African Dairy Development (EADD) Programme funded by the Bill and Melinda Gates Foundation and being implemented by the Heifer Project International, TechnoServe and ILRI; Heifer International dairy project in parts of the Rift Valley and Central Province through gifts of income-producing animals and training; and, the Kenya Dairy Project (KDP) funded by private donors and implemented by Technoserve Inc. in Nyala in Nyandarua North, Sabatia Dairy Farmers Cooperative in Eldama Ravine, Ndumberi Dairy Farmers in Kiambu and Muki Dairy in North Kinangop (Land O’ Lakes, 2008).

The government of Kenya has in addition since 2003 put in place several other measures to revive the dairy industry. These measures that led to the improvement in milk production and marketing included: restructuring and capacity building of Kenya Dairy Board; revival and strengthening of New KCC and other farmer organizations like the Agricultural Finance Cooperation (AFC) and cooperatives; review of dairy policies and regulations; improved milk producer prices and timely payment to milk producers by the New KCC; encouragement of development partners and private sector to mobilize more resources to the industry; monitoring of dairy imports; and improved coordination and collaborative ventures among stakeholders that created synergies and better use of resources. These interventions resulted to strengthened producer organizations which were able to collectively market dairy produce and access extension services, among others things. Consequently, production and marketing of dairy produce increased with the annual milk production rising from 2.8 billion litres in 2002 to 4 billion litres in 2009 and intakes by processors rising from 143.5 million litres in 2002 to 407 million in 2009, representing a 180% increase (Kenya Dairy Board website, accessed in June 2010).

The review of import and export procedures for dairy produce as a legislative measure on the other hand led to diminished imports and a sharp rise in exports. The quantity of milk and milk products exported rose from 0.1 million Kg in 2001 to 10.9 million Kg in 2008, but due to drought, export figures dropped to 5 million Kg in 2009. Imports on the other hand declined from 5.2 million Kg in 2001 to 3.4 million Kg in the same period.

Disturbances in early 2008 arising from the post election violence however disrupted dairying activities in most parts of the Rift Valley (which is a major milk producing area) leading to a drop in milk production and marketed volume in the affected areas. Moreover, the country faced a severe drought in 2009 causing scarcity of animal feed and
water which led to a further drop in milk production. Due to this shortage, the local dairy processing plants were unable to sustain the previously acquired export markets.

On the contrary, with the onset of the rains in late 2009 (October/November), there was an upsurge in milk production leading to increased milk intakes by the formal sector. This sudden increase in production overstretched the handling capacities of the major milk processors. Daily intakes by processors rose sharply from an average of 0.8 million litres in May 2009 to 1.7 million litres by January 2010.

Consequently, the government of Kenya proposed various short, medium and long term interventions to deal with increased milk production in future. The short term interventions included availing a grant of Ksh 300 million to the Kenya Dairy Board (KDB) to buy the excess processed milk from the processors. The medium term interventions included financial support to the New KCC to refurbish and commission a UHT plant in Eldoret and a condensed milk plant in Naivasha, as well as procure, install and commission an additional milk drier. In the long term, the government plans to incorporate milk powder into the National Food Strategic Reserve to improve uptake of excess milk which can then be offloaded into the market during times of scarcity; expand dairy markets away from the traditional markets; enhance quality production of milk and milk products; upscale the existing school milk programme; and create a Dairy Development Fund to provide resources for necessary interventions in the dairy industry including marketing, surveillance, product development and compliance to standards.

The private sector has also taken steps to deal with upsurges in milk production. For instance, in February 2011, Githunguri Dairy launched a UHT milk production unit in a bid to increase its market share. It is expected that the UHT factory will enable the dairy to absorb more milk during periods of glut and increase exports of long-life milk to markets like South Sudan, Rwanda and Mauritius.

2.5 Chapter Summary

This chapter has reviewed literature based in the research questions in the study. First, a review is done on the government support to small scale farmers. The specific support reviewed include policy development, extension services, research, and financial support. Secondly, a review is done on the influence of government support on poverty reduction. This includes specific review on the government poverty reduction initiatives in the agricultural sector and the influence of interventions on poverty levels from an empirical
point of view. Thirdly, the chapter presents a review of the challenges facing the growth of small scale farmers where the challenges are first reviewed followed by the government interventions in the dairy sector to reduce the challenges. The next chapter is the research methodology. Then the research findings are presented in chapter 4 while chapter 5 is the conclusion and recommendations.
CHAPTER 3

3.0 RESEARCH METHODOLOGY

3.1 Introduction

This chapter presents the research methodology. The chapter begins with a discussion of the research design used in the study. The next section deals with issues of population and sampling design. Under this, the population is discussed followed by the sampling design. The next section then discusses the data collection methods. Under this section, the type of data sought and the sources for the same are provided. This section also provides a discussion on the variables by providing an operational perspective of the variables used in the study. This helps provide the measures for the dependent variable and the independent variables.

3.2 Research Design

Research design is the blueprint for conducting the study that maximizes control over factors that could interfere with the validity of the findings. Designing a study helps the researcher to plan and implement the study in a way that helps the researcher to obtain intended results, thus increasing the chances of obtaining information that could be associated with the real situation, (Burns and Grove, 2001). A research design is defined as a blueprint for conducting a research project, (Malhotra and Birks, 2006). This study sought to evaluate the role of agribusiness on developing rural communities in Kenya. This study therefore adopted a descriptive study design. This design is most appropriate for the study as it allowed the researcher to describe the research issues among dairy farmers in the sampled area.

3.3 Population and Sampling Design

3.3.1 Population

Polit and Hungler, (1999) refer to the total population of a study as an aggregate of all the objects, subjects or members that conform to a set of specifications. In this study the population was the small scale farmers who are also involved in agribusiness from Githunguri SACCO Limited. The SACCO had 17,000 members at the time of the study (Githunguri Dairy Farmers, 2014). The sample is shown in Table 3.1.
### Table 3.1: Population

<table>
<thead>
<tr>
<th></th>
<th>Male</th>
<th>Female</th>
<th>Total</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Small Scale</td>
<td>10253</td>
<td>6729</td>
<td>16982</td>
<td>99.89%</td>
</tr>
<tr>
<td>Large Scale</td>
<td>15</td>
<td>3</td>
<td>18</td>
<td>0.11%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>10268</td>
<td>6732</td>
<td>17000</td>
<td>100</td>
</tr>
</tbody>
</table>

#### 3.3.2 Sampling Design

**3.3.2.1 Sampling Frame**

A sampling frame could be a list of geographical areas, institutions, individuals, or other units added (Churchill and Brown, 2007). However, a proper definition was provided by Cooper and Schindler, (2006) who deemed a sample frame to be a list of elements from which the sample is actually drawn and is closely related to the population. It is complete and correct list of population members only. There is agreement on this definition by Saunders, Lewis, and Thornhill, (2007), who define a sample frame as the complete list of all the cases in the population from which the sample is drawn. It is essential that the next step after the clear definition of population is the sampling frame. The sampling frame was the small scale farmers that are members of Githunguri SACCO and were involved in agribusiness distributed according to their gender.

**3.3.2.2 Sampling Technique**

A sampling technique is the method of selecting elements from the population that represents the population (Collis and Hussey, 2006). A stratified sampling technique based on gender was employed to select the respondents for the study.

**3.3.2.3 Sample Size**

A sample is a proportion of a population that represents the characteristics of a population. The researcher used stratified sampling method based on gender to select the respondents. The researcher further used convenience sampling to select 100 households involved in small scale dairy farming to be the respondents of the study as shown in Table 3.2. This method is preferred because it less expensive and more timely (Gravetter and Forzano, 2015). The rationale of using 100 households was that these farmers had similar...
opinions to the SACCO and how agribusiness has improved their lives, thus were representative enough. The sample of 100 households was considered appropriate for the study.

Table 3.2: Sample Size

<table>
<thead>
<tr>
<th>Category</th>
<th>Population</th>
<th>Sample</th>
<th>Sample Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Small scale Female dairy farmers</td>
<td>6729</td>
<td>30</td>
<td>30%</td>
</tr>
<tr>
<td>Small scale Male dairy farmers</td>
<td>10253</td>
<td>70</td>
<td>70%</td>
</tr>
<tr>
<td>Total</td>
<td>16982</td>
<td>100</td>
<td>100%</td>
</tr>
</tbody>
</table>

3.4 Data Collection Methods

The study used primary data. Structured questionnaires were developed and organized on the basis of the research’s specific objectives and will be distributed to the sampled respondents. Since there is need to ensure that responses from the different respondents are uniform, the questionnaires were structured. There are various reasons for the choice of questionnaires as primary data collection instrument; they are not only versatile but also the most popular instruments and a relatively inexpensive way of getting information (Saunders et al., 2007).

The measuring instrument used was the questionnaire. The instrument for data collection consisted of structured (closed-ended) questions. Respondents were required to give their answers which were restricted to a 5 point Likert scale with 1 being “Strongly Agree” and 5 being “Strongly Disagree”. The questionnaires was structured into 4 sections: Section A collected the farmers’ demographics, Section B measured the respondents’ feelings on the government support to small scale farmers, Section C sought the respondent’s opinion on the role of the government on the poverty reduction and Section D focused on the challenges that face the growth of small scale farmers in Kenya. The researcher conducted a Focus Group Discussion where the farmers were gathered at one place and the survey conducted on them.
3.5 Research Procedures

After developing the research instruments, the researcher will seek permission to use them from the University. The researcher will then carry out a pilot study to pretest the questionnaires. In order to test the validity of the questionnaire, a pilot test- adhering to the fundamentals tested by Cooper and Schindler, (2006) who stated its importance as being a tool that can be utilized so as to detect weaknesses in the research design and the instruments. The researcher will then administer the questionnaires herself in order to ensure a high degree of accuracy.

3.6 Data Analysis Methods

Completed questionnaires were edited for completeness and consistency. Data collected was coded using a predetermined coding scheme and analyzed both qualitatively and quantitatively. The data was organized and analyzed using SPSS – statistical package for social sciences. Quantitative analysis was done using descriptive statistics and inferential statistics such as frequency counts, percentages, means and standard deviations. The results of the data analysis were presented using pie charts, graphs, and tables. The analysis was done based on each of the research questions of the study and the results interpreted and reported in chapter four of this paper.

3.7 Chapter Summary

The chapter describes the research methodology that was used to carry out this study. First it has defined the population then has described the sampling technique, and size. This is followed by a description of the method that was used to conduct the research and the justification of the use of the chosen method. There is further discussion on the data collection methods and the instruments that was used. So as to ensure reliability, the research procedures are clearly described while conducting the pilot test. At the end, the chapter looked at the data analysis methods which was used by the researcher to analyze the collected data, and make conclusive remarks on the study. The following chapter presents the findings of the study. This is followed by conclusions and recommendations in chapter 5.
CHAPTER 4

4.0 RESULTS AND FINDINGS

4.1 Introduction

This chapter is a presentation of the results of the data analysis process carried out based on the objectives of the study. The purpose of the study was to investigate the role of the government in agribusiness activities in supporting small scale dairy farmers in rural communities in Kenya. The data analysed in this study was collected using questionnaires and was analysed using descriptive and inferential statistics and is presented using tables and figures.

4.2 Demographic Results

The researcher sought to establish the various characteristics of the farmers who were the subject of the study. These characteristics are presented in the sections below.

4.2.1 Level of Education

The researcher sought to establish the level of education of the farmers. The results in Figure 4.1 show that majority (64%) of the farmers had attained secondary education, 28% had attained primary education while the rest 8% had attained University education.

Figure 4.1: Level of Education
4.2.2 Age Range

The researcher sought to establish the age range of the farmers. The results presented in Figure 4.2 show that 46% of the farmers were above 50 years of age, 39% between 42-49 years, 12% between 34-41 years and 3% between 26-33 years.

Figure 4.2: Age Range

4.2.3 Marital Status

The study sought to establish the marital status of the farmers. The results presented in Figure 4.3 below show that a majority (80%) of the farmers were married, 10% were widowed, 4% were single, 3% divorced and another 3% were separated.

Figure 4.3: Marital Status
4.2.4 Length involved in Dairy Farming

The study sought to establish how long the farmers had been involved in dairy farming. The results presented in Figure 4.4 show that 37% had been farming for a period of between 8-10 years, 35% for more than 11 years, 23% for a period between 5-7 years and 5% for a period between 2-4 years.

![Bar chart showing length involved in dairy farming](chart.png)

Figure 4.4: Length Involved in Dairy Farming

4.2.6 Employment

The study sought to establish whether the farmers were also engaged in other forms of employment. The results presented in Figure 4.5 shows that 32% of the farmers were also employed.

![Pie chart showing employment](chart2.png)

Figure 4.5: Other Employment
4.3 Government Support to Small Scale Traders

The study sought to establish the ways in which the government supports small scale dairy farmers. The results from Table 4.1 reveal that the various ways included Provision of Free AI Services (86%), Provision of pesticides at subsidized rates (75%), Provision of fertilizer at subsidized rates (72%), Employment of Agricultural extension officers (97%), Establishment of milk collection centres (96%), R&D to improve hybrid cattle (75%), Provision of affordable processing and marketing (KCC) (75%) and the development of policies that allow the private sector to establish milk processing centers to serve farmers at competitive prices.

Table 4.1: Ways of Government Support

<table>
<thead>
<tr>
<th>Provision</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Provision of Free AI Services</td>
<td>86</td>
<td>86.0</td>
</tr>
<tr>
<td>Provision of pesticides at subsidized rates</td>
<td>75</td>
<td>75.0</td>
</tr>
<tr>
<td>Provision of fertilizer at subsidized rates</td>
<td>72</td>
<td>72.0</td>
</tr>
<tr>
<td>Employment of Agricultural extension officers</td>
<td>97</td>
<td>97.0</td>
</tr>
<tr>
<td>Establishment of milk collection centres</td>
<td>96</td>
<td>96.0</td>
</tr>
<tr>
<td>R&amp;D to improve hybrid cattle</td>
<td>75</td>
<td>75.0</td>
</tr>
<tr>
<td>Provision of affordable processing and marketing (KCC)</td>
<td>75</td>
<td>75.0</td>
</tr>
<tr>
<td>Development of supporting policies</td>
<td>91</td>
<td>91.0</td>
</tr>
</tbody>
</table>

The study further sought to establish the rate at which the government is involved in supporting small scale dairy farmers. The results presented in Table 4.2 show that Government support is very important for farmer’s success (mean = 4.52, SD = 0.502). The results further show that the government develops policies to promote dairy farming (mean = 4.62, SD = 0.487). The results also show that the policies have positive influence on of dairy farming (mean = 4.75, SD = 0.435). The results also show that subsidized loans play an important role in the growth of dairy farming in the country (mean = 4.7, SD = 0.460). The results further show that there is need for the government to continue supporting the growth of dairy farming as a way of poverty reduction and development of rural communities (mean = 4.78, SD = 0.416). Lastly, the results show that government
bodies involved in agricultural research are critical in the growth of agriculture in general and dairy farming in the country (mean = 4.54, SD = 0.50).

Table 3.2: Rate of Government Involvement

<table>
<thead>
<tr>
<th></th>
<th>Mean</th>
<th>Std. Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Government support is very important for farmer’s success</td>
<td>4.520</td>
<td>.50212</td>
</tr>
<tr>
<td>The government develops policies to promote dairy farming</td>
<td>4.620</td>
<td>.48783</td>
</tr>
<tr>
<td>These policies have positive influence on dairy farming</td>
<td>4.750</td>
<td>.43519</td>
</tr>
<tr>
<td>The subsidized loans play an important role in the growth of dairy farming in the country</td>
<td>4.700</td>
<td>.46057</td>
</tr>
<tr>
<td>There is need for the government to continue supporting the growth of dairy farming as a way of poverty reduction and development of rural communities</td>
<td>4.780</td>
<td>.41633</td>
</tr>
<tr>
<td>The government bodies involved in agricultural research are critical in the growth of agriculture in general and dairy farming in the country</td>
<td>4.540</td>
<td>.50091</td>
</tr>
</tbody>
</table>

4.4 Influence of Government Support on Poverty Reduction

The study sought to establish extent to which support by the government to small scale dairy farmers helps in poverty reduction. The results presented in Table 4.3 show that the government has established various support mechanisms (Mean = 4.56, SD = 0.499). The results also show that the support allows farmers to benefit more from their efforts (Mean = 4.47, SD = 0.501). The results also show that there is a relationship between dairy farming and poverty reduction (Mean = 4.56, SD = 0.408). The results also show that Growth in dairy farming leads to reduction in poverty (Mean = 4.71, SD = 0.456). The results also show that reduced poverty is an indicator of improved development in rural communities (Mean = 4.63, SD = 0.485).The results further show that the focus on dairy farming leads to faster growth and development of the economy (Mean = 4.51, SD = 0.502). The results also show that the over reliance on agriculture in Kenya makes it very significant in rural development (Mean = 4.67, SD = 0.472). The results further show that
there are fewer young people focusing on dairy farming in the country and this has contributed to slower economic growth and development (Mean = 4.55, SD = 0.50). The results also show that dairy farming has had positive effects on poverty reduction in other countries (Mean = 4.56, SD = 0.499). The results also show that dairy farming helps improve living standards (Mean = 4.78, SD = 0.416). Finally, the results show that increased investments in dairy farming will fasten the rate of poverty reduction (Mean = 4.66, SD = 0.476).

**Table 4.3: Extent to which Government Support reduces Poverty**

<table>
<thead>
<tr>
<th></th>
<th>Mean</th>
<th>Std. Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>The government has established various support mechanisms for small scale dairy farmers in the country</td>
<td>4.56</td>
<td>.49889</td>
</tr>
<tr>
<td>Government support ensures small scale dairy farmers are able to benefit more from their efforts</td>
<td>4.47</td>
<td>.50161</td>
</tr>
<tr>
<td>There is a relationship between dairy farming and poverty reduction in rural communities in Kenya</td>
<td>4.56</td>
<td>.49889</td>
</tr>
<tr>
<td>Growth in dairy farming leads to reduction in poverty</td>
<td>4.71</td>
<td>.45605</td>
</tr>
<tr>
<td>Reduced poverty is an indicator of improved development in rural communities</td>
<td>4.63</td>
<td>.48524</td>
</tr>
<tr>
<td>The focus on dairy farming leads to faster growth and development of the economy</td>
<td>4.51</td>
<td>.50242</td>
</tr>
<tr>
<td>The over reliance on agriculture in Kenya makes it very significant in rural development</td>
<td>4.67</td>
<td>.47258</td>
</tr>
<tr>
<td>There are fewer young people focusing on dairy farming in the country and this has contributed to slower economic growth and development</td>
<td>4.55</td>
<td>.50000</td>
</tr>
<tr>
<td>Dairy farming has had positive effects on poverty reduction in other countries</td>
<td>4.56</td>
<td>.49889</td>
</tr>
<tr>
<td>Involvement in dairy farming has helped you improve your living standards</td>
<td>4.78</td>
<td>.41633</td>
</tr>
<tr>
<td>Increased investments in dairy farming will fasten the rate of poverty reduction</td>
<td>4.66</td>
<td>.47610</td>
</tr>
</tbody>
</table>

### 4.5 Challenges Facing Growth of Small Scale Dairy Farmers

The study sought to establish the various challenges facing small scale dairy farming in Kenya. The results presented in Table 4.4 show that the various challenges include collapse of the free AI services provision (99%), Corrupt agricultural extension officers
and veterinary officers (95%), Poor road network to milk collection and processing centers (95%), delay of payments from the KCC (83%), Poor milk prices by private milk processors (81%), The high costs of hybrid cattle (89%), and Poor dissemination of research findings from bodies such as KARI (83%).

Table 4.4: Challenges facing Small Scale Dairy Farming in Kenya

<table>
<thead>
<tr>
<th>Challenge</th>
<th>Freq</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Collapse of the free AI services provision</td>
<td>99</td>
<td>99.0</td>
</tr>
<tr>
<td>Corrupt agricultural extension officers and veterinary officers</td>
<td>95</td>
<td>95.0</td>
</tr>
<tr>
<td>Poor road network to milk collection and processing centers</td>
<td>95</td>
<td>95.0</td>
</tr>
<tr>
<td>Delay of payments from the KCC</td>
<td>83</td>
<td>83.0</td>
</tr>
<tr>
<td>Poor milk prices by private milk processors</td>
<td>81</td>
<td>81.0</td>
</tr>
<tr>
<td>The high costs of hybrid cattle</td>
<td>89</td>
<td>89.0</td>
</tr>
<tr>
<td>Poor dissemination of research findings from bodies such as KARI</td>
<td>83</td>
<td>83.0</td>
</tr>
</tbody>
</table>

The study further sought to establish the extent to which small scale dairy farming is affected by the challenges mentioned above. The results presented in Table 4.5 show that the growth of dairy farming has been affected by various challenges (Mean = 4.62, SD = 0.488). The study further shows that these challenges influence the attractiveness of the industry in a negative manner (Mean = 4.2, SD = 0.55). Finally, the results show that handling these challenges needs collaboration between farmers, the government and the private sector (Mean = 462., SD = 0.488).
Table 4.5: Extent of the effects of the Challenges

<table>
<thead>
<tr>
<th></th>
<th>Mean</th>
<th>Std. Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>The growth of dairy farming has been affected by various challenges</td>
<td>4.6200</td>
<td>.48783</td>
</tr>
<tr>
<td>These challenges influence the attractiveness of the industry in a negative manner</td>
<td>4.2000</td>
<td>.55048</td>
</tr>
<tr>
<td>Handling these challenges needs collaboration between farmers, the government and the private sector</td>
<td>4.6200</td>
<td>.48783</td>
</tr>
</tbody>
</table>

4.6 Chapter Summary

The study sought to establish the ways in which the government supports small scale dairy farmers. The results of the study indicate various ways of government support. These include Provision of Free AI Services (86%), Provision of pesticides at subsidized rates (75%), Provision of fertilizer at subsidized rates (72%), Employment of Agricultural extension officers (97%), Establishment of milk collection centres (96%), R&D to improve hybrid cattle (75%), Provision of affordable processing & marketing (KCC) (75%) and the development of policies that allow the private sector to establish milk processing centers to serve farmers at competitive prices.

The study sought to establish extent to which support by the government to small scale dairy farmers helps in poverty reduction. The results show that the government has established various support mechanisms (Mean = 4.56, SD = 0.499). The results also show that the support allows farmers to benefit more from their efforts (Mean = 4.47, SD = 0.501). The results also show that there is a relationship between dairy farming and poverty reduction (Mean = 4.56, SD = 0.408). The results also show that Growth in dairy farming leads to reduction in poverty (Mean = 4.71, SD = 0.456). The results also show that reduced poverty is an indicator of improved development in rural communities (Mean = 4.63, SD = 0.485). The results further show that the focus on dairy farming leads to faster growth and development of the economy (Mean = 4.51, SD = 0.502). The results also show that the over reliance on agriculture in Kenya makes it very significant in rural development (Mean = 4.67, SD = 0.472). The results further show that there are fewer young people focusing on dairy farming in the country and this has contributed to slower
economic growth and development (Mean = 4.55, SD = 0.50). The results also show that dairy farming has had positive effects on poverty reduction in other countries (Mean = 4.56, SD = 0.499). The results also show that dairy farming helps improve living standards (Mean = 4.78, SD = 0.416). Finally, the results show that increased investments in dairy farming will fasten the rate of poverty reduction (Mean = 4.66, SD = 0.476).

The study sought to establish the various challenges facing small scale dairy farming in Kenya. The results show that the various challenges include collapse of the free AI services provision (99%), Corrupt agricultural extension officers and veterinary officers (95%), Poor road network to milk collection and processing centers (95%), delay of payments from the KCC (83%), Poor milk prices by private milk processers (81%), The high costs of hybrid cattle (89%), and Poor dissemination of research findings from bodies such as KARI (83%).

The study further sought to establish the extent to which small scale dairy farming is affected by the challenges mentioned above. The results show that the growth of dairy farming has been affected by various challenges (Mean = 4.62, SD = 0.488). The study further shows that these challenges influence the attractiveness of the industry in a negative manner (Mean = 4.2, SD = 0.55). Finally, the results show that handling these challenges needs collaboration between farmers, the government and the private sector (Mean = 462., SD = 0.488).

This chapter has presented the results and findings of the study. Presented here are the results of demographic analysis, how government supports small scale farmers, the influence of government support on poverty reduction, and the challenges farmers face. The next chapter focuses on the summary of results, conclusion of findings, and the recommendations of the study.
CHAPTER 5

5.0 DISCUSSION, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

This chapter presents the discussions of the findings of the study as well as the conclusions and recommendations. The chapter is divided into the following sections; summary of the study, discussion of findings, conclusions and finally, recommendations.

5.2 Summary of the Study

The purpose of the study was to investigate the role of the government in agribusiness activities in supporting small scale dairy farmers in rural communities in Kenya. The study thus sought to answer the following questions: in what ways does the government support small scale dairy farmers in rural communities in Kenya? To what extent does the support that government offers to small scale dairy farmers in Githunguri Kenya influence poverty reduction? What are the challenges facing the growth of small scale dairy farmers in Githunguri, Kenya?

This was a descriptive survey focusing on Githunguri SACCO Limited. The population of this study was farmers who are members of the SACCO. Thus, the population was 17,000 members of the SACCO. A stratified sampling technique was then used to select a sample size of 100 dairy farmers (70 male and 30 female). Primary data was collected using structured questionnaires. The questionnaires were checked for both validity and reliability using pilot study. The questionnaires were administered directly by the researcher through interviews. The collected data was analyzed using descriptive analysis with the aid of SPSS where data was coded and entered then analyzed using percentages, mean scores and standard deviations.

The study found that the government supports small scale dairy farmers by offering free AI services, pesticides at subsidized rates, fertilizers at subsidized rates, provision of agricultural extension officers, establishment of milk collection center, research and development to improve hybrid cattle, provision of affordable processing and marketing, and development of policies that allow the private sector to establish milk processing centers. The study also found that the government was supportive in reducing poverty. The study also revealed that the farmers were faced with challenges which affected the
attractiveness of the industry negatively thus collaboration between farmers and the government was necessary.

5.3 Discussion of Findings

5.3.1 Ways in which the government supports small scale dairy farmers in rural communities in Kenya

The study sought to establish the ways in which the government supports small scale dairy farmers. The results of the study indicate various ways of government support. These include Provision of Free AI Services, Provision of pesticides at subsidized rates, Provision of fertilizer at subsidized rates, Employment of Agricultural extension officers, Establishment of milk collection centres, R&D to improve hybrid cattle, Provision of affordable processing and marketing (KCC), and the development of policies that allow the private sector to establish milk processing centers to serve farmers at competitive prices. These results clearly indicate that the government of Kenya has been supporting small scale dairy farming using various means. This is in line with the results of previous studies such as Wagacha and Ngugi, (1999) who note that the government over the years supported agricultural activities such as investment in research, extension and use of improved inputs (fertilizers, seeds and chemicals).

The results of the study indicate that the government can use various means to support the small scale dairy farmers and these range from the development of favorable policies, provision of inputs as well as the marketing and sale of the dairy products. As can be seen from these results, the government has been putting measures to ensure that small scale dairy farmers across the country are supported as a way of promoting economic activities in the rural areas with the aim of reducing poverty levels. As noted by Mabiso et al., (2012), the cost of key inputs such as pesticides, fertilizer, drugs and vaccines is high for resource-poor farmers. Most farmers therefore do not use them and thus the need for the government to come in and give various forms of support. This view is also consistent with Masika (2012)

5.3.2 The extent to which the support that the government offers to small scale dairy farmers in Githunguri Kenya influence poverty reduction

The study sought to establish extent to which support by the government to small scale dairy farmers helps in poverty reduction. The results of the study showed that the
government support given to small scale dairy farmers has the ability to greatly influence poverty reduction. A majority of the farmers strongly agreed with this statement and this is in line with previous research on the same. Stanton (2000) notes that, the synergy between agribusiness and agro-industrial linkage (commercial activities) is a great potential for development of the poor rural majority in Kenya.

The government therefore supports the growth of small scale dairy farming in a country through the development, adoption and implementation of various conducive policies. These policies can be from the input stage to the marketing stage. For example in Kenya, the government over the years supported agricultural activities such as investment in research, extension and use of improved inputs (fertilizers, seeds and chemicals), (Ngugi & Wagacha, 1999).

The government is today providing farm inputs such as seeds and fertilizer at subsidized prices as a way of ensuring farmers are able to acquire planting seeds. In the dairy sector the government has been providing artificial insemination (AI) services for free to farmers in order to help them improve the quality of their herds for better production of milk. This shows that the government has been involved in one way or another in supporting the activities of small scale dairy farmers and agribusiness in general as has been indicated by the results of the study. This is consistent with Grewal, Grunfeld and Sheehan (2012).

5.3.3 The challenges facing the growth of small scale dairy farmers in Githunguri, Kenya

The study also sought to establish the various challenges facing small scale dairy farming in Kenya. The results show that these challenges include collapse of the free AI services provision, corrupt agricultural extension officers and veterinary officers, poor road network to milk collection and processing centers, delay of payments from the KCC, poor milk prices by private milk processors, the high costs of hybrid cattle, and poor dissemination of research findings from bodies such as KARI. These results clearly show that the growth of the small scale dairy sector is affected by various challenges which affect agribusiness in general and that these influence the ability of the sector to reduce poverty levels in the rural communities through economic development. This is in line with the results of (Irungu, Mburu, Maundu, Grum, & Zeledon, 2008)
As is suggested by Thurlow et al (2007), the changing and unpredictable raining seasons has greatly affected their ability to plan their farming activities. The limited access to extension services in most parts of the country with the National extension staff: farmer ratio standing at 1:1,500. This situation has hindered most farmers from keeping pace with changing technological advances. It is important to note that dairy farming requires the use of new technologies in order to increase the milk yields per cow and thus increase the benefits from small scale dairy farming. The results of the study therefore clearly list down the various challenges that are facing small scale dairy farming in Kenya and it is clear that these are in line with the results of previous studies. This is consistent with the findings of (Odhiambo et al., 2004).

5.4 Conclusions of the Study

From the findings of the data analysis, the study makes the following conclusions.

5.4.1 Ways in which the government supports small scale dairy farmers in rural communities in Kenya

The study sought to establish the ways in which the government supports small scale dairy farmers. These results clearly indicate that the government of Kenya has been supporting small scale dairy farming using various means. The study therefore concludes that there are various channels that the government can use to support the small scale dairy farmers in the country so as to ensure that small scale dairy farmers benefit from their efforts to the maximum level. This will also help since better performance of the sector will result in better rates of economic development in the country.

5.4.2 The extent to which the support that the government offers to small scale dairy farmers in Githunguri Kenya influence poverty reduction

The study sought to establish extent to which support by the government to small scale dairy farmers helps in poverty reduction. The results of the study showed that the government support given to small scale dairy farmers has the ability to greatly influence poverty reduction. The study therefore concludes that one of the ways that the government can use to combat poverty in the rural communities is through supporting agribusiness activities such as small scale dairy farming. This is due to the fact that agribusiness leads to higher income levels and thus improved standards of living.
5.4.3 The challenges facing the growth of small scale dairy farmers in Githunguri, Kenya

The study also sought to establish the various challenges facing small scale dairy farming in Kenya. The results clearly show that the growth of the small scale dairy sector is affected by various challenges which affect agribusiness in general and that these influence the ability of the sector to reduce poverty levels in the rural communities through economic development. The study therefore concludes that agribusiness activities such as small scale dairy farming are negatively influenced by various challenges which need to be addressed effectively so as to ensure farmers benefit from their activities.

5.5 Recommendations of the Study

5.5.1 Government Support to Dairy farming

The study has concluded that there are various channels that the government can use to support the small scale dairy farmers in the country. The study therefore recommends that the government and the small scale dairy farmers should come up with more effective ways of support in order to improve the performance of the sector. The study also recommends that more studies should focus on establishing the effects of the various ways of government support on the growth of small scale dairy farming in the country.

5.5.2 Government Support and Poverty Reduction

The study concludes that one of the ways that the government can use to combat poverty in the rural communities is through supporting agribusiness activities such as small scale dairy farming. The study therefore recommends that the government needs to develop more favorable policies to support the small scale dairy farming in rural areas so as to ensure poverty reduction. The study also recommends that future studies should adopt regression analysis to establish the relationship between government support to small scale dairy farmers and poverty reduction in rural communities.

5.5.3 Challenges faced by Small Scale Dairy Farmers in Kenya

The study has concluded that the growth of small scale dairy farming in the country is faced by various challenges. These include collapse of the free AI services provision, corrupt agricultural extension officers and veterinary officers, poor road network to milk collection and processing centers, delay of payments from the KCC, poor milk prices by
private milk processors, the high costs of hybrid cattle, and poor dissemination of research findings from bodies such as KARI. The study therefore recommends that the government and the farmers should come up with ways of combating these challenges for the purpose of reducing poverty and economic growth and development. The study further recommends that a comprehensive study of the challenges facing the small scale dairy industry in the country should be carried out on a larger scale.
REFERENCES


Appendix 1: Questionnaire

INSTRUCTIONS

The purpose of this questionnaire is to determine the effect of agribusiness in developing the economy of rural communities. Please select the response from among those given that best represents your views. The information gathered in this questionnaire is strictly confidential.

SECTION A: Respondent Demographics

1. What is your gender?
   Male ( )  Female ( )

2. What is your level of education?
   None ( )  Primary ( )  Secondary ( )  University ( )  Other ( )

3. What is your age range?
   <18 ( )  19-25 ( )  26-33 ( )  34-41 ( )  42-49 ( )  >50 ( )

4. What is your marital status?
   Married ( )  Single ( )  Divorced ( )  Separated ( )  Widowed ( )  Other ( )

5. How long have you been involved in dairy farming?
   <1 year ( )  2-4 years ( )  5-7 years ( )  8-10 years ( )  >11 years ( )

6. Are you also employed?
   Yes ( )  No ( )
SECTION B: Ways in which the government supports Small scale dairy farmers in rural communities in Kenya

7. Please chose from the list below the various ways in which the government supports small scale dairy farmers
   a) Provision of free Artificial Insemination (AI) services ( )
   b) Provision of pesticides and other farm chemicals at subsidized rates ( )
   c) Provision of fertilizer and other farm inputs at subsidized prices ( )
   d) Employment of agricultural extension officers and veterinary officers ( )
   e) Establishment of milk collection centers ( )
   f) Research into improvement and development of hybrid cattle for better milk production ( )
   g) Provision of affordable processing and marketing channels through KCC ( )
   h) Development of policies that allow the private sector to establish milk processing centers to serve farmers at competitive prices ( )
   i) Others (Please Specify)
In the table below, please rate the following ways in which the government is involved in dairy farming

<table>
<thead>
<tr>
<th></th>
<th>Tick One Option in each case</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Strongly</td>
</tr>
<tr>
<td>8.</td>
<td>Government support is very important for farmer’s success</td>
</tr>
<tr>
<td>9.</td>
<td>The government of Kenya has over the years developed policies to promote dairy farming</td>
</tr>
<tr>
<td>10.</td>
<td>The government policies have influenced the growth of dairy farming in a positive way</td>
</tr>
<tr>
<td>11.</td>
<td>The subsidized loans by the government agencies and other lending institutions play an important role in the growth of dairy farming in the country</td>
</tr>
<tr>
<td>12.</td>
<td>There is need for the government to continue supporting the growth of dairy farming as a way of poverty reduction and development of rural communities</td>
</tr>
<tr>
<td>13.</td>
<td>The government bodies involved in agricultural research are critical in the growth of agriculture in general and dairy farming in the country</td>
</tr>
<tr>
<td>14.</td>
<td>Others</td>
</tr>
</tbody>
</table>
|     | (Please Specify……………………………)
|     |                      |                       |          |         |         |
SECTION C: The extent to which the support by the government to small scale dairy farmers help in poverty reduction

In the table below, please indicate the extent to which you agree with the following statements concerning how government support to small scale dairy farmers helps poverty reduction among rural communities

<table>
<thead>
<tr>
<th></th>
<th>Tick One Option in each case</th>
</tr>
</thead>
<tbody>
<tr>
<td>15. The government has established various support mechanisms for small scale dairy farmers in the country</td>
<td>Strongly Disagree Disagree Neutral Agree Strongly Agree</td>
</tr>
<tr>
<td>16. Government support ensures small scale dairy farmers are able to benefit more from their efforts</td>
<td></td>
</tr>
<tr>
<td>17. There is a relationship between dairy farming and poverty reduction in rural communities in Kenya</td>
<td></td>
</tr>
<tr>
<td>18. Growth in dairy farming leads to reduction in poverty</td>
<td></td>
</tr>
<tr>
<td>19. Reduced poverty is an indicator of improved development in rural communities</td>
<td></td>
</tr>
<tr>
<td>20. The focus on dairy farming leads to faster growth and development of the economy than other sectors in developing countries</td>
<td></td>
</tr>
<tr>
<td>21. The over reliance on agriculture in Kenya makes it very significant in rural development</td>
<td></td>
</tr>
<tr>
<td>22. There are fewer young people focusing on dairy farming in the country and this has contributed to slower economic growth and development</td>
<td></td>
</tr>
<tr>
<td>23. Dairy farming has had positive effects on poverty reduction in other countries</td>
<td></td>
</tr>
<tr>
<td>24. Involvement in dairy farming has helped you improve your living standards</td>
<td></td>
</tr>
<tr>
<td>25. Increased investments in dairy farming will fasten the rate of poverty reduction</td>
<td></td>
</tr>
<tr>
<td>26. Others (Please Specify) ..................................................</td>
<td></td>
</tr>
</tbody>
</table>
SECTION D: Challenges facing Small scale dairy farmers in Kenya

27. Please choose from the list below the various challenges that face small scale dairy farming in rural communities in Kenya
   a) Collapse of the free AI services provision ( )
   b) Corrupt agricultural extension officers and veterinary officers ( )
   c) Poor road network to milk collection and processing centers ( )
   d) Delay of payments from the KCC ( )
   e) Poor milk prices by private milk processors ( )
   f) The high costs of hybrid cattle ( )
   g) Poor dissemination of research findings from bodies such as KARI ( )
   h) Others, please specify………………………………………………………………

In the table below, please indicate the extent to which you agree with the following statements concerning the challenges facing small scale dairy farming in Kenya.

<table>
<thead>
<tr>
<th>Statement</th>
<th>Tick One Option in each case</th>
</tr>
</thead>
<tbody>
<tr>
<td>28. The growth of dairy farming has been affected by various challenges</td>
<td>Strongly</td>
</tr>
<tr>
<td>29. These challenges influence the attractiveness of the industry in a negative manner</td>
<td></td>
</tr>
<tr>
<td>30. Handling these challenges needs collaboration between farmers, the government and the private sector</td>
<td></td>
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<td>31. Others, Specify……………………………………</td>
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THANK YOU FOR TAKING TIME TO FILL THE QUESTIONNAIRE