

**CHALLENGES OF STRATEGY IMPLEMENTATION OF AGRICULTURAL
RESEARCH INSTITUTES IN KENYA**

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DECLARATION

I declare that this research project is my original work and has not been presented to any other University.

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This research project has been submitted for examination with my approval as the University supervisor.

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DEDICATION

I dedicate this project to my husband Mr. Ouma and children; Emmanuel and Sharleen for their support and understanding during the entire course and project. God bless you all abundantly.

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I would like to thank God for the gift of life, health, strength and knowledge that He bestowed upon me and for enabling me complete this research study.

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ABBREVIATIONS AND ACRONYMS

CHSS	College of Humanities and Social Sciences
GDP	Gross Domestic Product
NGOs	Non-Governmental Organizations
RBV	Resource-Based View
SCA	Sustainable Competitive Advantage
SPSS	Statistical Package for Social Sciences
S.D	Standard Deviation

LIST OF TABLES

Table 4.1: Response Rate.....	22
Table 4.2: Gender Distribution	22
Table 4.3: Ownership.....	23
Table 4.4: Number of years the institution has been in existence	24
Table 4.5: Number of years worked in the organization	24
Table 4.6: Challenges of implementation of strategies.....	26

ABSTRACT

Strategic management entails scanning the environment, formulating and implementing strategies that would give the organization a competitive advantage over other organizations operating in the same industry. This study sought to identify the challenges faced by agricultural research institutes in strategy implementation in Kenya. The study applied cross-sectional survey. Cross-sectional research design was chosen because it appeals for generalization within a particular parameter. The data obtained was standardized to allow easy comparison. The population of the study was 23 agricultural research institutes in Kenya. The study collected primary data using a questionnaire. The questionnaire contained both open and closed ended questions. Quantitative data collected was analyzed by the use of Statistical Package for Social Sciences (SPSS) and presented through percentages, means, standard deviations and frequencies. From the findings, the top major challenge was lack of feelings of ownership of a strategy or execution plans among key employees followed by poor communication in the organization. Another major challenge was whether problems requiring top management involvement were communicated early enough. The researcher found out that a majority of the respondents agreed that to a moderate extent, the indicated challenges affected the various strategy implementations in the respective research institutes. The study recommends a participatory organization structure whereby employees are adequately represented in policy making. This will ensure that they obtain a sense of ownership of the strategy. The agricultural sector being a significant contributor of the country's GDP and being the sector that employs the majority of the country's population, its enhancement is crucial and highly welcomed. This study proposes that further studies should be done in the processing and packaging of agricultural commodities to add on the literature in agricultural sector. The study should look at how the strategies adopted influenced the productivity and overall performance of the research centers.

TABLE OF CONTENTS

DECLARATION.....	ii
DEDICATION.....	iii
ACKNOWLEDGEMENTS	iv
ABBREVIATIONS AND ACRONYMS.....	v
LIST OF TABLES	vi
ABSTRACT.....	vii
CHAPTER ONE: INTRODUCTION	1
1.1 Background of the Study	1
1.1.1 Strategy Implementation	2
1.1.2 Agricultural Sector in Kenya.....	4
1.1.3 Agricultural Research Institutes in Kenya.....	5
1.2 Research Problem	6
1.3 Research Objective	9
1.4 Value of Study	9
CHAPTER TWO: LITERATURE REVIEW	11
2.1 Introduction.....	11
2.2 Theoretical Foundation	11
2.2.1 Resource Based Theory.....	11
2.2.2 Open systems Theory	12
2.3 Strategy Implementation Process.....	13
2.4 Strategy Implementation Challenges	16
CHAPTER THREE: RESEARCH METHODOLOGY	19
3.1 Introduction.....	19
3.2 Research Design.....	19
3.3 Population of the Study.....	20
3.4 Sample Size.....	20
3.5 Data Collection	20

3.6 Data Analysis	21
CHAPTER FOUR: DATA ANALYSIS, FINDINGS AND DISCUSSION	22
4.1 Introduction.....	22
4.2 Response Rate.....	22
4.3 Demographic Information.....	22
4.4 Challenges of Implementation of Strategies	25
4.5 Discussion.....	28
CHAPTER FIVE: SUMMARY, CONCLUSION AND RECOMMENDATIONS .	33
5.1 Introduction.....	33
5.2 Summary.....	33
5.3 Conclusions.....	34
5.4 Recommendations.....	34
5.4.1 Implications for Theory.....	34
5.4.2 Implications for Managerial Policy	35
5.4.3 Implications for Managerial Practice	36
5.5 Limitations of the Study.....	36
5.6 Recommendations for Further Research.....	37
REFERENCES.....	38
APPENDICES	42
Appendix I: List of Agricultural Research Institutes in Kenya	42
Appendix II: Research Questionnaire	44

CHAPTER ONE

INTRODUCTION

1.1 Background of the Study

Strategic management is about scanning the environment; formulating and implementing strategy that would give the organization a competitive advantage over other organizations in the same industry. Strategic management consists of decisions and actions used to formulate and implement strategies that provide a competitively superior fit between the organization and its environment to enable it achieve organizational objectives (Hannagan, 2002). Since the environment is dynamic, it is important for the organization capabilities to match strategy and strategy to match the environment in order to compete effectively. The dynamism in the environment destabilizes most organizations that do not have formal strategic plans. Such organizations employ tactics that are temporary and solve the issues at stake at that particular time. Organizations of such nature employ emergent strategies on a daily basis to solve issues at stake. Most organizations have since moved away from making emergent strategies to making long term deliberate strategies. In order to ensure successful strategy implementation, the implementing agents need to choose appropriate strategies that would boost the implementation of strategies formulated.

There are several theories explaining strategic management and strategy implementation. This study will be directed by the resource-based view which stipulates that in strategic management the fundamental sources and drivers to firms' competitive advantage and

superior performance are mainly associated with the attributes of their resources and capabilities which are valuable and costly-to-copy (Mills, Platts and Bourne, 2003). Achieving a Sustainable Competitive Advantage (SCA) allows the firm to earn economic rents or above-average returns. Open systems theory provides managers with metaphors, terminology and explanations about how organizations function. All organizations are influenced and also influence the environment in which they operate hence the need to take care of the operating environment when developing and implementing strategies.

The agricultural research organizations in Kenya have also been greatly affected by changes in their operating environment and therefore need to identify the strategy implementation challenges and respond accordingly for them to be able to survive. Agricultural research institutes in Kenya develop a number of strategies that are meant to direct their operations towards the attainment of their vision and mission. The sector is however subject to turbulence in the operating environment following rapid changes and developments in information and technology. The operating environment also presents a number of challenges which need to be dealt with if these institutes are to achieve their vision. For instance, a high proportion of agriculture in Kenya is rain fed agriculture where there is high dependency on natural rainfall and other climatic conditions. In order to succeed in their operations, it is important that agricultural research institutes implement their developed strategies accurately and in a timely manner.

1.1.1 Strategy Implementation

Strategy implementation is the process by which objectives, strategies and policies are put into action through the development of programs, budgets and procedures. Strategy

formulation and implementation by organizations is therefore meant to help them achieve their goals and objectives. According to Wheelen and Hunger (2008) strategy implementation refers to the sum total of the activities and choices required for the execution of strategic plan. The dynamism in the environment has made it difficult and challenging to formulate strategic plans and then assume that everything would run smoothly when it comes to implementation.

Aosa (1992) observed that strategy implementation is likely to be successful when congruence is achieved between several elements particularly organization structure, culture, resource allocation systems and leadership. Without this congruence, major challenges are bound to arise in the process of strategy implementation. Organizations which are effective at strategy implementation successfully manage six strategy supporting factors: action planning, organization structure, human resources, annual business plan, monitoring and control, and linkage (Birnbaum, 2006).

Preparation of a solid strategic plan is no longer enough to ensure profitable success unless it links virtually every internal and external operations of an organization with a focus on customer needs. Successful strategy implementation is important to any organization. Abuya (2013) emphasized that the strategy implementation could be more difficult than thinking up a good strategy. Harrison and Pelletier (1998) explained that the real value of a decision surfaced only after the implementation of a decision. In other words, it will not be enough to select a good decision and effective results will not be attained unless the decision is adequately implemented.

1.1.2 Agricultural Sector in Kenya

Agriculture is one of the pillars and most vital production sectors of any Nation's economy. The roles of the Kenyan agricultural sector include provision of food for the population. The sector has been the largest employer of labor with more than 70% of the nation's population involved in one form of agriculture-related activities or another. The sector provides income for the farming households as well as being a major source of foreign exchange earnings for the nation. Agriculture is the mainstay of the Kenyan economy directly contributing 26 per cent of the GDP annually, and another 25 per cent indirectly. The agricultural sector comprises six subsectors: industrial crops, food crops, livestock, horticulture, fisheries, and forestry. The agricultural research institutes are distributed across these six subsectors (Government of Kenya, 2010).

The Government of Kenya (2010) further indicates that horticulture is the largest subsector, contributing 33 per cent of the GDP and 38 per cent of export earnings. Food crops contribute 32 per cent of the GDP but only 0.5 per cent of exports, while the livestock subsector contributes 17 per cent of the GDP and 7 per cent of exports. Livestock and fisheries subsectors have huge potential for growth that has not been exploited. The agricultural sector also includes the development of arid and semi-arid lands. Thus, there are many players and stakeholders in the sector due to its role in the economy and its rural-based nature that touches the livelihoods of many people.

1.1.3 Agricultural Research Institutes in Kenya

Agricultural research is critically important in finding out ways to combat new strains of fungi, bacteria, weeds, insects, and other pests that can destroy crops. It is also the only way to find new varieties of crops and animals which yield better, be more disease resistant, and more drought-tolerant. Without agricultural research there is virtually no hope of feeding the expected nine billion people on the planet by 2050. The research organizations in Kenya comprises of both public and private organizations. Public research organizations are mainly research institutes owned by the Government conducting research to improve the economic welfare of its citizenry. On the other hand the major players in the private sector are the Non-Governmental Organizations (NGOs) who rely on donor funding to conduct research.

The agricultural research institute in Kenya has evolved drastically since its formal inception in the first decade of the 20th century (Ndiritu, Lynam & Mbabu, 1998). Pre-independence agricultural research in Kenya was designed to serve the large-scale farmers by evaluating and introducing new crop varieties and livestock breeds in production systems. At independence, agricultural research started to address the needs of small scale farmers. In order to facilitate responding to the demands of the small scale farmer in a timely manner, there was a corresponding expansion of research facilities to a country-wide network of laboratories and field stations. In addition new crop varieties, livestock breeds and production systems were tested for adaptation and productivity under a wide range of ecological and socio-economic conditions (KARI, 2009).

Building of partnerships between agricultural research organizations and an expanding range of stakeholders thus became a major feature of agricultural research in Kenya and the developing world in the late 20th century and continues to be equally important today. Research approaches and methodologies have also evolved from laboratory and station based experiments and trials to on-farm adaptive testing of technologies in collaboration with farmers (Ndubi, 2006). With the increasing challenges of globalization, the role of agricultural research has become even more critical. Furthermore, demands on agricultural research systems have changed, increasing drastically due to changing national and international development policies and needs.

A number of organizations in Kenya carry out agricultural research resulting in the development of knowledge, technology and innovations. These organizations include; Kenya Agricultural Research Institute (KARI), Kenya Forestry Research Institute(KEFRI), Kenya Sugar Research Foundation (KESREF), Tea Research Foundation, Coffee Research Foundation of Kenya, the Universities such as University of Nairobi and Egerton University. However in Kenya the leading organization mandated to carry out research in agriculture is the Kenya Agricultural Research Institute (KARI, 2009).

1.2 Research Problem

Increasing level of competition in many competitive environments, have increased the need for organizations to implement a formulated strategy accurately and in a timely manner so as to respond to the challenges posted by the dynamic operating environment.

Successful strategy implementation is one source of competitive advantage among organizations as they create a fit both in the external and internal operating environment. The rate of change in both internal and external environments of firms is increasing, which necessitates increased attention to strategy implementation. Strategies are formulated by organizations in order to achieve a more favorable position. Over the years a large number of concepts and techniques have been proposed on how organizations should develop and implement a suitable strategy. Some of these concepts and techniques concentrate on matching an organization's resources and skills with the opportunities and risks created by its external environment (Buzzell & Bradley, 1987), while others focus on the organization's resources and capabilities as drivers of competitive advantage (Grant, 1991).

Agricultural research provides information for policy makers and funding agencies. It provides transfer of research-induced technology to a farmer which is the only way to measure research benefits to society. Agricultural research impact study also provides feedback to scientists on which technologies or technology components are successful at farm levels. The agricultural research institutes in Kenya have been in the forefront in bringing about increased agricultural production. It has been stated that agricultural development begins with increased control over the environment and increased output of desirable plants and animals. This development must be a sustainable one, which is explicit to the promotion of agricultural technologies that are ecologically sound, economically viable, socially just and meet with the needs of the present population without compromising the ability of future generations to satisfy their own needs.

Agricultural research institutes in Kenya have adopted various strategies in strategy implementation to counter challenges.

Several studies have been undertaken on challenges of strategy implementation. Ochieng (2010) examined strategic planning and implementation practices at the College of Health Sciences, University of Nairobi and established that CHSS used a corporate strategic plan and that its objectives were aligned to the vision, and mission statements. This study did not review the agricultural research sector of the University but the College of Health Sciences. Nyariki (2012) examined challenges of strategy implementation at the University of Nairobi and established that some aspects of culture, structure, unsound reward systems, and insufficient communication were some of the major challenges faced by the University of Nairobi in its strategy implementation. Though this study focused on a center of research, it did not focus on agriculture but instead examined challenges of strategy implementation at the University as a whole. Magambo (2012) studied challenges of strategy implementation in public corporations in Kenya and identified inadequate funding and untimely disbursement of resources as a hindrance to the effective implementation of strategies in public corporations. This study concentrated on all public corporations in Kenya. The current study will consider only agricultural research institutes which constitute both public and private organizations.

From the above analysis of previous studies, it can be noted that the existing studies did focus on either strategies or challenges of strategy implementation in other sectors other than the agricultural sector. This study will seek to establish the challenges faced by the

agricultural research institutes in Kenya in strategy implementation. What are the challenges faced by agricultural research institutes in strategy implementation?

1.3 Research Objective

The study objective was to identify the challenges faced by agricultural research institutes in strategy implementation in Kenya.

1.4 Value of Study

This study will be important to the policy makers in the agricultural research institutes industry as they will be able to know the challenges faced by agricultural institutes in strategy implementation and how they affect the success of research institutes.

Further, the study will be important to agricultural research institutes' managers as it will help them understand the challenges they face that can hinder successful implementation of strategy in their firms. It is through successful strategy implementation that agricultural research institutes deliver on their vision and mission.

The results of this study will also be important to researchers and scholars, as it will form a basis for further research. The scholars will use this study as a basis for discussions on strategy implementation and overall strategic management in organizations. The study will also be a source of reference material for future researchers on other related topics; it will also suggest areas for further research where other academicians can undertake the same topic in their studies.

The study will also be important in extending the theories governing open systems because there is no one organization that exists in a vacuum, all organizations are influenced and also influence the environment in which they operate. Therefore, this study will extend the level of knowledge and applicability of theories of open system by explaining agricultural research institutes as affected by their operating environment.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter summarizes the information from other researchers who have carried out research in the same field of study. The specific areas covered here are theoretical perspective of the study.

2.2 Theoretical Foundation

This research has been anchored in two theories; the resource based theory and the open systems theory. These theories are explained in details below.

2.2.1 Resource Based Theory

The resource-based view stipulates that in strategic management the fundamental sources and drivers to firms' competitive advantage and superior performance are mainly associated with the attributes of their resources and capabilities which are valuable and costly-to-copy (Mills, Platts & Bourne, 2003). Building on the assumptions that strategic resources are heterogeneously distributed across firms and that these differences are stable overtime, Barney (1991) examines the link between firm resources and sustained competitive advantage. Four empirical indicators of the potential of firm resources to generate sustained competitive advantage can be value, rareness, inimitability, and non-substitutability. In Barney (1991), firm resources include all assets, capabilities, organizational processes, firm attributes, information, knowledge, etc. controlled by a

firm that enable the firm to conceive and implement strategies that improve its efficiency and effectiveness.

Furthermore, a firm is said to have a sustained competitive advantage when it is implementing a value creating strategy not simultaneously being implemented by any current or potential competitors and when these other firms are unable to duplicate the benefits of this strategy (Barney, 1991). Barney (1991) further argued that to have the potential to generate competitive advantage, a firm resource must have four attributes: it must be valuable, in the sense that it exploits opportunities and/or neutralizes threats in a firm's environment; it must be rare among a firm's current and potential competition; it must be imperfectly imitable; and there cannot be strategically equivalent substitutes for this resource.

The resource-based view of the firm (RBV) has emerged in recent years as a popular theory of competitive advantage. Achieving a Sustainable Competitive Advantage (SCA) allows the firm to earn economic rents or above-average returns. The resource-based view contends that the answer to this question lies in the possession of certain key resources, that is, resources having the characteristics of value, barriers to duplication and appropriability (Fahy, 2000).

2.2.2 Open systems Theory

Open systems theory provides managers with metaphors, terminology and explanations about how organizations function. It reflects the belief that all organizations are unique in

part because of the unique environment in which they operate and that they should be structured to accommodate unique problems and opportunities. It has dominated as a framework for managerial behavior and organizational analysis. The rational systems perspective focuses on structure as a significant tool for the efficient achievement of organizational goals. It emphasizes the role of management in deciding such structures and determining the specific goals that are to be achieved. Hence, the focus is on formal structures, the specificity of goals, and the formalization of rules and roles.

Environmental influences that affect open systems can be described as either specific or general. The specific environment refers to the network of suppliers, distributors, government agencies, and competitors with which a business enterprise interacts. The general environment encompasses four influences that emanate from the geographic area in which the organization operates. The open-systems theory assumes that all large organizations are comprised of multiple subsystems, each of which receives inputs from other subsystems and turns them into outputs for use by other subsystems. The subsystems are not necessarily represented by departments in an organization, but might instead resemble patterns of activity.

2.3 Strategy Implementation Process

Strategic management process is not complete without effective implementation of an organization's strategy. This is crucial and hence the reason why the process and content of strategy needs to incorporate all forms of implementation. According to Ansoff (1990) strategic management is an organized approach vested on management to reposition the

organization in a turbulent environment and in a manner that will ensure success. Ansoff points out the organization's capabilities against a turbulent environment and how a firm strikes the balance in order to remain competitive and stay in business. According to David (1997) strategic plans serve as communication channels which allow for cascading of information to lower units of an organization leading to participation by all employees. Thompson *et al* (2007) introduces the aspect of a strategic plan and states that it enable a company to cope with challenges in the industry and the competitive forces.

Jonson and Scholes (1993) define strategic management on the basis of deciding on the strategy to be adopted and how it will be executed. This is evident in the organization's strategic analysis, where strategic options chosen will enhance the organization's competitive position. It highlights major phase in strategic management which an organization must follow diligently if it wants to succeed. Strategic management consists of the entire organization's focus on both short and long term goals. Organizations must engage management staff to take charge of strategic management process. This involves strategic planning, which is the process of developing and ensuring consistency between the organization's objectives and resources and its changing opportunities (Robison, 1997). It documents a system of doing business that leads to greater profit and growth. Strategic planning turns an organization's mission into achievable goals as contained in the strategic plan.

Implementation of strategic plans is one of the most challenging areas when it comes to strategic management. Strategy implementation is more difficult and time consuming to accomplish than the planning stage. Implementation is action oriented, employees should act for the implementation to take place, and the actions have to be taken by individual stakeholders (employees). Management of human resource has been and is still one of the most complex capital resources. Systems are handled well when there are good motivational leaders and a changing organization with business like thinking that creates a fit between the strategy and how the organization does its operations.

The structure should be supportive of the strategies otherwise it may not be easy to implement the strategies. The management looks at the current structure and establishes whether it can support the strategy to be implemented. Organizations that cannot access the correct human resource are not able to plan and implement the strategy effectively. Human resource capital can be sourced from outside the organization or be trained to fit into the system that is effective to the strategy formulation and implementation. Annual business plans are made for the purpose of allocating funds for the plans. Monitoring and control of the plans requires periodic checks so as to make sure the implementation is on course. Actions that are not in line with the strategy are aligned immediately to return the plan back on track. Linking the above factors is crucial since it ensures that there is linkage between the action plan and the business plan or between the business plan and the ability to be supported by the organization structure. Communication of the action plans is important for the implementation to be successful.

Christensen and Donovan (1998) mentioned that intended strategies would be implemented as they have been envisioned if three conditions were met. First, those in the organization must understand each important detail in management's intended strategy. Second, if the organization is to take collective action, the strategy needs to make as much sense to each of the members in the organization as they view the world from their own context, as it does to top management. Finally, the collective intentions must be realized with little unanticipated influence from outside political, technological, or market forces.

2.4 Strategy Implementation Challenges

The implementation of appropriate strategies remains one of the most difficult areas of management (Thompson, Strickland & Gamble, 2007). Researchers (Giles, 1991; Johnson & Scholes, 2002) have revealed that 1 out of 10 strategies are implemented successfully. Studies that have been done have pointed a number of challenges in strategy implementation, e.g: weak management roles in implementation, a lack of communication, lacking a commitment to the strategy, unawareness or misunderstanding of the strategy, unaligned organization systems and resources, poor coordination and sharing of responsibilities, inadequate capabilities, competing activities and uncontrollable environmental factors (Giles, 1991, Sanderlands, 1994).

Strategy implementation is a process where managers diffuse a strategy into a user community (Kwon & Zmud, 1987). Top management commitment is believed to be essential for any strategy implementation success (Wixom & Watson, 2001). A plethora

of studies have examined the impact of top management commitment on strategy implementation outcomes. It has been found that top management commitment significantly affects user beliefs (for instance perceived ease of use, perceived usefulness) (Lewis et al., 2003), organizational implementation success (Wixom & Watson, 2001), progressive use of systems, and organizational strategy adoption (Bruque-Cámara et al., 2004).

Among the issues pointed out by Hrebiniak (2006) as overreaching issues that impede strategy implementation is the organizational change. He notes that managers are often trained to plan and not to execute strategies; the top managers are therefore always reluctant to soil their hands in the messy tasks of implementation. Strategy implementation always creates the need to manage change in complex organizational contexts (Kazmi, 2008). Many of these areas of change are behavioral in nature and are therefore multifaceted and messy in nature. For instance, leadership style changes required to implement different kinds of strategies or the cultural changes to be brought about to facilitate new strategy implementation are intricate matters that call for careful handling (Kazmi, 2008).

The success of any strategy depends heavily on its fit with organizational structure (Chandler 1962; Paterson, 1988). There has been increased emphasis on the importance of organizational structure in ensuring successful strategy implementation. Change in strategy often requires changes in the way an organization is structured because structure dictates how objectives and policies will be established and how resources will be allocated (Sababu, 2007). The identification of structures that support strategy

implementation has, however, been a highly complicated issue. This complication may be due to lack of consensus on what strategy and sometimes to the confusion about which component of the strategy to focus on. Since the classic statement by Chandler (1996) that “structure follows strategy,” there has been interest in the relationship between strategy and organizational dimensions such as structure. The relationship between the strategy and organizational dimensions has typically been explained in a sequential model where firms decide on a strategy and then put in place appropriate organizational choices such as structure, systems, rewards, and processes that support this strategy (Govindarajan, 1988).

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

Research methodology sets out various stages and phases that were followed in completing the study. This chapter discusses the methods that were used in the collection and analysis of data and how data presentation has been done. It also discusses how the objective of the study was met. It specifically covers issues to do with research design, data collection and data analysis.

3.2 Research Design

The study applied cross-sectional survey. Cross sectional survey is a type of descriptive research design involving the collection of information from any given sample of the population element once (Ngechu, 2004). Mugenda and Mugenda (2003) notes that a survey attempts to collect data from members of a population and describes phenomenon by asking individuals about their perceptions, attitudes, behaviour or values.

Cross-sectional research design was chosen because it appealed for generalization within a particular parameter. The data obtained was standardized to allow easy comparison. Moreover, it explored the existing status of two or more variables at a given point in time. This design enhanced a systematic description that was accurate, valid and reliable as possible regarding the strategies and challenges of strategy implementation of agricultural research institutes in Kenya.

3.3 Population of the Study

Population in statistics is the specific population about which information is desired. According to Bryman and Bell (2003) a population is a well-defined or set of people, services, elements, events, group of things or households that are being investigated. Mugenda and Mugenda (2003) define population as group of individual to which the researcher would like to generalize her results from. It comprises of all potential participants that can make up the study group.

3.4 Sample Size

The population of the study was the 23 agricultural research institutes in Kenya as shown in the appendix I. Due the small number of the research institutes, the study used census approach by collecting the information from departmental managers from each of the research institutes to come up with 23 as the sample size. Bryman and Bell (2003) indicate that census is a collection of information from all units in the population or a 'complete enumeration' of the population. We use a census when we want accurate information for many subdivisions of the population.

3.5 Data Collection

The study collected primary data using a questionnaire. The questionnaire contained both open and closed ended questions. Closed ended questions made use of a five point Likert scale. Questionnaires give the researcher comprehensive data on a wide range of factors. Mugenda (2003) define primary data as the data the researcher collects for the first time from target respondents. Primary data is considered more reliable and up to date. The

questionnaire is a fast way of obtaining data as compared to others instruments (Mugenda & Mugenda, 2003).

The particular officers who participated in the study were the departmental managers of the 23 agricultural research firms in Kenya. The study targeted operation managers from each agricultural research organization. These officers were selected upon because of their key role in strategy implementation.

3.6 Data Analysis

The completed questionnaires were first edited for completeness and consistency. Quantitative data collected was analyzed by the use of Statistical Package for Social Sciences (SPSS) and presented through percentages, means, standard deviations and frequencies. The data was then split down into different aspects of strategic implementation aspects and challenges. This offered a systematic and qualitative of the study objectives.

To help generalize the findings the collected data was grouped using percentages and measures of central tendency. Descriptive statistics including, cross-tabulation, frequencies and percentages, mean and standard deviation were used for comparison.

CHAPTER FOUR

DATA ANALYSIS, FINDINGS AND DISCUSSION

4.1 Introduction

This chapter presents analysis, findings and discussion of the study on challenges of strategy implementation of agricultural research institutes in Kenya.

4.2 Response Rate

A total of 23 questionnaires were administered out of which 19 were filled and returned giving a response rate of 82.6%. This response rate was made a reality after the researcher dropped the questionnaires and made personal visits and phone calls to the respondents who then completed the questionnaires at the workplace as shown in Table 4.1.

Table 4.1: Response Rate

	Frequency	Percent
Completed	19	82.6
Not completed	4	17.4
Total	23	100

4.3 Demographic Information

4.3.1 Gender of the Respondent

The study sought to establish the gender of the respondents. Table 4.2 shows the findings.

Table 4.2: Gender Distribution

Gender	Frequency	Percent
Male	10	52.6
Female	9	47.4
Total	19	100.0

Table 4.2 illustrates the gender of the respondents interviewed. From the findings, 10 of the respondents were male which represents 52.6% while 9 of the respondents were female which translates to 47.4%. The findings show that most of these respondents were male compared to female.

4.3.2 Ownership

The study sought to establish the owners of the research facilities where the respondents worked. Table 4.3 shows the findings.

Table 4.3: Ownership

Ownership	Frequency	Percent
Government institute	15	78.9
Local NGO	2	10.5
International NGO	2	10.5
Total	19	100.0

From the table 4.3 above, 15 of the respondents interviewed which is equivalent to 78.9% worked in a government owned institute while 2 of the respondent equivalent to 10.5% worked in an organization owned by an international NGO, while 2 of the respondents translating to 10.5% worked in a locally owned NGO. This study therefore concluded that most of the respondents worked in a Government institute.

4.3.3 Number of Years the Institution has been in Existence

The study sought to establish the number of years of operations of the respondents' research institution facilities where the respondents worked. Table 4.4 shows the findings

Table 4.4: Number of Years the Institution has been in Existence

Years of existence	Frequency	Percent
6-10 yrs	2	10.5
above 16 yrs	17	89.5
Total	19	100.0

From Table 4.4 above, 2 of the respondents had worked in institutions that had been in existence for a period of 6-10 years, this translates to 10.5% of the total respondents involved in the study. 17 respondents had worked in institutions that had been in existence for a period of above 16 years, this translates to 89.5% of the total respondents. The findings showed that majority of the respondent's equivalent to 17 worked in institutions that had been in existence for a period of above 16 years.

4.3.4 Number of Employees in the Organization

The study also sought to establish the total work force of the respondents' work place. From the findings, the study established that an average of 30 to 70 employees worked in the research institutes.

4.3.5 Number of Years Worked in the Organization

The study also sought to establish the total number of years that the respondents had worked in the research centers. Table 4.5 shows the findings.

Table 4.5: Number of years worked in the organization

Years Worked	Frequency	Percent
below 5 yrs	6	31.6
6-10 yrs	6	31.6
11-15 yrs	4	21.1
above 16 yrs	3	15.8
Total	19	100.0

From Table 4.5 above, 6 of the respondents had worked in their respective institutions for a period of below 5 years, this represents 31.6% of the respondents while 4 of the respondents had worked in their respective institutions between 6 and 10 years, this represents 31.6% of the respondents, 4 of the respondents had worked in their respective institutions in a time interval of 11 to 15 years which represents 21.1% of the respondents and 3 of the respondents had worked in their individual institutions for a period of above 16 years, this represents 15.8% of the total respondents. This study showed that a majority of the respondents had worked in their institutions for a period of less than 10 years.

4.3.6 Number of Branches

The study also sought to find out the number of branches that the respective research facilities where the respondents worked. On average, the research facilities had a total of 10 to 20 branches countrywide.

4.3.7 Position of the Respondents

The study sought to establish the various job positions held by the respondents at the workplace. The study showed that a majority of the respondents occupied managerial positions.

4.4 Challenges of Implementation of Strategies

The study sought to establish the level to which the respondents agreed with the challenges of strategy implementation. The findings are shown in table 4.6.

Table 4.6: Challenges of implementation of strategies

Challenge	Mean	S. D
Limited resources	2.105	0.809
Inappropriate organization structure	2.158	0.688
Lack of conducive organizational structure	2.158	0.834
Conflicting inter-organizational agreements/partnership	2.368	0.761
Misunderstanding and lack of trust by employees	2.579	0.838
Coalitions and power centers within the organization	2.263	0.654
Abrupt changes in the operating environment	2.316	0.749
Limited top management commitment and ownership of the strategy	2.316	0.749
Poor communication in the organization	2.790	0.713
Competing activities distracted attention from implementing strategies	2.000	0.943
Capabilities of employees involved were insufficient	1.684	0.820
Uncontrollable factors in the external environment had an adverse impact on implementation	1.737	0.991
Leadership and direction provided by departmental managers were inadequate	2.421	0.692
Key implementation tasks and activities were not sufficiently defined	2.316	0.749
Advocates and supporters of the strategic decision left the organization during implementation	1.842	0.602
Overall goals were not sufficiently understood by employees	2.579	0.692
Key formulators of the strategic decision did not play an active role in implementation	2.368	0.831
Problems requiring top management involvement were not communicated early enough	2.684	0.946
Deviation from original plan objectives	2.421	0.507
Lack of feelings of ownership of a strategy or execution plans among key employees	2.947	1.026
Grand Mean	2.302	0.779

As indicated in the above table, the grand mean was 2.302, an indication that majority of the respondents inferred that the challenges were experienced to a little extent. On whether inappropriate organization structure and lack of conducive organizational structure was a challenge in the implementation of strategies, majority of the respondents indicated to a little extent as shown with a mean of 2.158. These findings concur with

Paterson (1988) who deduced that success of any strategy depends heavily on its fit with organizational structure. The respondents agreed to a little extent that conflicting inter-organizational agreements/partnership was a challenge in the implementation of strategies as shown with a mean of 2.368. Majority of the respondents agreed to a moderate extent that misunderstanding and lack of trust by employees was a challenge in the implementation of strategies as shown with a mean of 2.579.

The study found out that coalitions and power centers within the organization was a challenge in the implementation of strategies to a little extent as shown with a mean of 2.263. On whether abrupt changes in the operating environment was a major challenge in the implementation of strategies, majority of the respondents agreed to a little extent as shown with a mean of 2.316. The respondents agreed to a little extent that Limited top management commitment and ownership of the strategy was a challenge to the implementation of strategies as shown with a mean of 2.316. The respondents agreed to a moderate extent that poor communication in the organization was a challenge in implementation of strategies as shown with a mean of 2.790

The respondents agreed to a little extent that competing activities distracted attention from implementing strategies and capabilities of employees involved were insufficient as shown with a mean of 2.000 and 1.684 respectively. The respondents further agreed to a little extent that uncontrollable factors in the external environment had an adverse impact on implementation as shown with a mean of 1.737. These findings are in line with Sanderlanders (1994) who postulated that competing activities and uncontrollable

environmental factors hindered strategy implementation. The respondents agreed to a little extent that leadership and direction provided by departmental managers were inadequate and Key implementation tasks and activities were not sufficiently defined as shown with a mean of 2.421 and 2.316 respectively. These findings concur with Paterson (1988) who deduced that success of any strategy depends heavily on its fit with organizational structure. On whether the overall goals were not sufficiently understood by employees, the study established that majority of the respondents agreed to a moderate extent as shown with a mean of 2.579.

The respondent further agreed to a moderate extent that problems requiring top management involvement were not communicated early enough as shown with a mean of 2.684. The findings concur with Giles (1991) and Sanderlands (1994) who found out that lack of communication in the organization hindered strategy implementation. The respondents agreed to a moderate extent that there was lack of feelings of ownership of a strategy or execution plans among key employees as shown with a mean of 2.947. These finding concur with (Christensen and Donovan, 1998) who poised that the strategy needs to make as much sense to each of the members in the organization as they view the world from their own context.

4.5 Discussion

From the findings the major challenges facing the agricultural research institute were revealed to be lack of feelings of ownership of a strategy or execution plans among key employees, Poor communication in the organization and employee capability involved

were insufficient. According to Thompson, Strickland & Gamble (2007) the implementation of appropriate strategies remains one of the most difficult areas of management due to the numerous challenges it faces. Christensen and Donovan (1998) concluded that the strategy needs to make as much sense to each of the members in the organization as they view the world from their own context. On the other hand, Sanderland (1994) established that lack of communication in the organization hindered strategy implementation. Another major challenge was whether problems requiring top management involvement were communicated early enough and that inadequate capabilities hindered strategy implementation.

From the findings it was also established that resources was a challenge on strategy implementation and they indicated that it hindered it a little extent as indicated. Change in strategy often requires changes in the way an organization is structured because structure dictates how objectives and policies will be established and how resources will be allocated (Sababu, 2007). Thompson, Strickland & Gamble (2007) stated that the implementation of appropriate strategies remains one of the most difficult areas of management. He also further stated that the organization structure is a reflection of the management and thus also determines the success of strategy implementation in the organization. According to the findings from the study inappropriate organization structure hindered strategy implementation on a little extent, these findings concur with (Kazmi, 2008) who found out that strategy implementation always creates the need to manage change in complex organizational contexts. The study also established that lack of conducive organizational structure hindered strategy implementation to a little extent,

these findings were in agreement with (Kazmi, 2008) who posited that leadership style changes are required to implement different kinds of strategies or the cultural changes to be brought about to facilitate new strategy implementation are intricate matters that call for careful handling. From the findings it was evident that conflicting inter-organizational agreements/partnership affected strategy implementation to a little extent, these findings concur with (Chandler 1962; Paterson, 1988) who concluded that the success of any strategy depends heavily on its fit with organizational structure.

Misunderstanding and lack of trust by employees to a moderate extent was a challenge of strategy implementation. Johnson and Scholes (2002) concluded that 1 out of 10 strategies are implemented successfully. He further argued that the challenges faced such as weak management roles in implementation, a lack of communication, lacking a commitment to the strategy, and lack of trust hindered the success of the rest. Other factors that pose as challenges to strategy implementation can be unawareness or misunderstanding of the strategy hinders strategy implementation as hinted out by (Giles, 1991, Sanderlands, 1994).The findings also established that to a little extent coalitions and power centers within the organization was a challenge, these findings concur with (Giles, 1991, Sanderlands, 1994) who deduced that unaligned organization systems hinders strategy implementation. The study established that another challenge was abrupt changes in the operating environment to a little extent hindered strategy implementation, these findings concur with (Giles, 1991, Sanderlands, 1994) who posited that competing activities and uncontrollable environmental factors hindered strategy implementation.

On whether limited top management commitment and ownership of the strategy was a challenge the findings reveal that it was. This deduction agrees' with (Giles, 1991, Sanderlands, 1994) who found that weak management roles in implementation hindered strategy implementation. The study also established that the query whether Competing activities distracted attention from implementing strategies indicated that it did so only to a little extent, these findings concur with (Giles, 1991, Sanderlands, 1994) who concluded that competing activities and uncontrollable environmental factors hindered strategy implementation. The findings also revealed that to a little extent, leadership and direction provided by departmental managers were and thus posed as a challenge to strategy implementation. These findings concur with (Wixom & Watson, 2001) who found that top management commitment significantly affects user beliefs and organizational implementation success.

The findings also revealed that key implementation tasks and activities were not sufficiently defined to a little extent, these findings concur with (Giles, 1991, Sanderlands, 1994) who found out that unawareness or misunderstanding of the strategy hindered strategy implementation. The study also revealed that to moderate extent overall goals were not sufficiently understood by employees was a challenge to strategy implementation, these findings concur with (Giles, 1991, Sanderlands, 1994) who found out that misunderstanding of the strategy was a challenge in strategy implementation.

Key formulators of the strategic decision played an active role in their implementation were also established to be a challenge to a little extent. Wixom & Watson, (2001) deduced that top management commitment is believed to be essential for any strategy

implementation success. The findings established that deviation from original plan objectives hindered strategy implementation was also a challenge to a little extent. These findings concur with (Giles, 1991, Sanderlands, 1994) who found out that un aligned organization systems hindered strategy implementation. Strategic management process is not complete without effective implementation of an organization's strategy. However the many challenges that are faced may hinder the success of the implementation.

CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

This chapter presented the summary of the data findings, the conclusions drawn from the findings and the recommendations made. The conclusions and recommendations were drawn after addressing the research question which included identifying the challenges faced by agricultural research institutes in Kenya in strategy implementation and to establish to what extent the challenges have affected successful strategy implementation in the research institutes.

5.2 Summary

From the findings, majority of the respondents agreed that limited resources, inappropriate organization structure, lack of conducive organizational structure, abrupt changes in the operating environment coalitions, advocates and supporters of the strategic decision leaving the organization during implementation, key implementation tasks and activities being not sufficiently defined, leadership and direction provided by departmental managers being inadequate, key formulators of the strategic decision playing an active role in their implementation, problems requiring top management involvement being communicated early enough, deviation from original plan objectives, lack of feelings of ownership of a strategy or execution plans among key employees, uncontrollable factors in the external environment, competing activities distracted attention from implementing strategies, limited top management commitment and

ownership of the strategy and power centers within the organization was a challenge on strategy implementation to a little extent.

Misunderstanding and lack of trust by employees, Overall goals being not sufficiently understood by employees and poor communication in the organization to a moderate extent was a challenge on strategy implementation.

5.3 Conclusions

From the findings, the study established that indeed there are challenges that affect strategy implementation in the research institutes in Kenya. The researcher found out that a majority of the respondents agreed that to a moderate extent, the indicated challenges affected the various strategy implementations in the respective research institutes. A small proportion of the respondents attested that to a little extent, the indicated challenges influenced strategy implementation in their respective research institutions. An even smaller proportion of the respondents attested that to a great extent, the indicated challenges influenced strategy implementation in their respective research institutions.

5.4 Recommendations

The recommendations below indicate how the study would contribute towards theory, managerial policy and managerial practice.

5.4.1 Implications for Theory

The results of this study would also be important to researchers and scholars, as it would form a basis for further research by enriching the already existing literature on the challenges of implementation of turnaround strategies. These findings can be assessed by

future researchers so as to increase their knowledge on the topic. The findings of the study also imply that researchers in the future can be able to criticize the already existing theories, identify gaps as well as recommend areas that can be further researched on.

The findings of this study also imply that it has added literature to the already literature in existence and can be archived for future reference. This study was anchored on the theory of open systems and the resource based theory. The open system theory holds that organizations are strongly influenced by their environment. The findings of the study therefore imply that organizations can be able to access the environment in which the organizations are operating under and device proper management strategies to effectively address the challenges of implementation. The theory holds that in strategic management the fundamental sources and drivers to firms' competitive advantage and superior performance are mainly associated with the attributes of their resources and capabilities which are valuable and costly-to-copy

5.4.2 Implications for Managerial Policy

The study further recommends a participatory organization structure whereby employees are adequately represented in policy making. This will ensure that they obtain a sense of ownership of the strategy. All the relevant stakeholders should be involved in advance to help forecast uncertainties and risks that are bound to arise. Any external factor that is likely to surface should be brought to the attention of the stakeholders. The chain of command should be clear and straightforward to eradicate conflict of command.

In order to ensure effective strategy implementation the organization needs to address the existing challenges. The findings of the study will be important in establishing what it is

that the organization needs to address and thus organizations can come up with policies and procedures that will address the challenges. This will provide a framework that will assist in the monitoring of the progress of the strategy implementations and what other areas can be addressed.

5.4.3 Implications for Managerial Practice

From the summary of findings, the study recommends that the research institutes in the country need to eradicate misunderstandings and lack of trust by employees, Overall goals should be easily understandable to the employees and communication in the organization should be enhanced so as to avoid resistance to change.

The research institutes should provide all the relevant resources needed to implement strategies. Organization structure should not be rigid and the formulators of strategies should oversee their implementation. The study further recommends that managerial support should be adequate so as to provide technical support to the labor force, also the individual tasks to be achieved should be clearly spelt out and should not be ambiguous.

5.5 Limitations of the Study

The study faced a limitation as regards respondents confidence that the information provided would not be misused but used for the purpose for which it was meant. To overcome this challenge, the researcher assured the respondents that the information they provided would be treated with confidentiality and used for academic purposes only.

The study also faced a limitation in that the targeted respondents were busy and thus majority could not make it to finish up on the questionnaire in one sitting. In order to

address this challenge the researcher left the questionnaires with the respondent and picked them when they had completed.

5.6 Recommendations for Further Research

This study concentrated on determining the challenges of implementing strategies in the agricultural research institutes in Kenya. The agricultural sector being a significant contributor of the country's GDP and being the sector that employs the majority of the country's population, its enhancement is crucial and highly welcomed. This study proposes that further studies should be done in the processing and packaging of agricultural commodities to add on the literature in agricultural sector. Further studies on how the strategies adopted influenced the productivity and overall performance of the research centers should be carried out.

The study recommends that further research should be done on individual research institutes such as KARI. This will enable researchers to envision their findings to a formal way of evaluating the key challenges of strategy implementation.

REFERENCES

- Aaltonen, P. and Ikåvalko, H. (2002). Implementing strategies successfully, *Integrated Manufacturing Systems*,. 13 (6), 415-18
- Abuya, B. (2011). *Strategy Implementation Challenges at Action aid Kenya*. Unpublished MBA thesis. University of Nairobi.
- Alexander, L. (1985). *Successfully implementing strategic decisions. Long Range Planning*. 18 (3):91-97.
- Ansoff, I. (1990). *Implementing Strategic Management* (2nd Edition).New York: Prentice Hall.
- Aosa, E. (1992). Marketing and Strategy. *Marketing Review*: August
- Barney, J. (1991). *Strategic Management and Competitive Advantage: Concepts and Cases*. New Jersey: Pearson/Prentice Hall.
- Bartlett, C. A. and Ghoshal, S. (1996) *Release the Entrepreneurial Hostages from Your Corporate Hierarchy. Strategy & Leadership*. 24 (4).
- Birnbaum, B. (2006). *Strategy Implementation, Six Supporting Factors*. Retrieved from [http://www.businessballs.com/business strategy implementation](http://www.businessballs.com/business_strategy_implementation).
- Bruque-Cámara, S. Vargas-Sánchez, A. and Hernández-Ortiz, M. J. (2004). *Organizational determinants of IT adoption in the pharmaceutical distribution sector. European Journal of Information Systems*. 13:133-46.
- Bryman, A. and Bell, E. (2003). *Business Research Methods*. Third Edition. Free press.
- Buzell, D. and Bradley, T. (1987). *The PIMS principle: linking strategy to performance*. New York. The free press.

- Chandler AD. (1996). *Strategy and structure*. Cambridge (MA): MIT Press.
- Christensen, C. and Donovan, T. (1998). *The process of strategy development and implementation*. Working paper, Harvard Business School. Boston:1-17.
- David, F.R. (1997). *Strategic Management: (6th Ed)*. Upper Saddle River, New Jersey: Prentice Hall.
- Government of Kenya (2010). *Agricultural Sector Development Strategy 2010-2020*
- Govindarajan, V. (1988). Implementing competitive strategies at the business unit level: implications of matching managers to strategies, *Strategic Management Journal*. 10:251-269.
- Grant, R. M. (1991). *Contemporary Strategy Analysis: concept, Techniques, Applications*. (3rd edition). The free press.
- Hannagan, T. (2002). *Mastering strategic Management*. Ebsco Publishing.
- Harrison, E. and Pelletier, A. (1998) Levels of strategic decision success. *Management Decision*. 38 (2):107 - 118
- Harrison, E. (1996) A process perspective on strategic decision making. *Management Decision*. 34 (1): 46 – 53
- Hrebiniak, L. (2006). Implementing global strategies, *European Management Journal*, 10 (4): 392-5.
- Johnson, G. and Scholes, K. (2006) *Exploring Corporate Strategy: text and cases (7th Ed)*. Harlow: Pearson Education.
- Kazmi, A. (2008). *Strategic Management and Business Policy*. Tata McGraw-Hill, New Delhi, pp. 468-77.
- Kenya Agricultural Research Institute (KARI), Service Charter (2009)

- Kwon, T.H. and Zmud, R. W. (1987). Unifying the fragmented models of information systems implementation, *Critical Issues in Information Systems Research*, Wiley, New York, NY.
- Magambo, D. O. (2012). *Challenges of strategy implementation in public corporations in Kenya*. Unpublished MBA. University of Nairobi.
- Mills, J. Platts, K. and Bourne, M. (2003). *Competence and resource architectures*. *International Journal of Operations and Production Management*. 23(9):977-994
- Mugenda, O.M. and Mugenda A.G. (2003). *Research Methods, Quantitative and Qualitative Approaches*. ACTS Press, Nairobi, Kenya.
- Ndiritu, C. Lynam, J. & Mbabu, A. (1998). *Transforming of Agricultural Research Systems in Africa*. Michigan State University Press.
- Ndubi M. (2006). *Strategic planning and implementation practices at the College of Health Sciences*. University of Nairobi. Unpublished MBA. University of Nairobi.
- Nyariki, K. (2012). *Challenges of strategy implementation at the University of Nairobi*. Unpublished MBA. University of Nairobi.
- Ochieng, B. O. (2010). *Strategic planning and implementation practices at the College of Health Sciences*. University of Nairobi. Unpublished MBA. University of Nairobi.
- Porter, M. E. (1980). *Strategies for Change: Logical Incrementalism*. Homewood II: Irwin.
- Porter, M. E. (1985): *Competitive Strategy*. Free Press.
- Retrieved from: <http://www.ascu.go.ke/DOCS/ASDS%20Final.pdf>
- Robinson, V. (2007). How School Leaders Make a Difference to Their Students. Paper presented at the 2007 International Confederation of Principals Conference,

Auckland. Retrieve from

<http://www.leadspace.govt.nz/leadership/articles/pdf/robinson.pdf>

Sababu, B. M. (2007). *Strategic Management: The Analytical Approach*. San Francisco: Jossey-Bass.

Thomson, A. A. and Strickland, A. J. and Gamble, C., K., (2007). *Crafting and implementing Strategy: Text and Readings*. (10th edition). McGraw Hill: New York.

Wheelen, T. L. & Hunger, D. J. (2008). *Strategic management and business policy: Concepts and cases*. (11th Ed). Pearson Prentice Hall: Upper Saddle River.

Wixom, B. H. and Watson, H. (2001). An empirical investigation of the factors affecting data warehousing success, *MIS Quarterly*. 25: 17-41.

APPENDICES

APPENDIX I: LIST OF AGRICULTURAL RESEARCH INSTITUTES IN KENYA

1. The International Livestock Research Institute (ILRI)
2. Kenya Agricultural Research Institute (KARI)
3. Kenya Sugar Research Foundation (KSREF)
4. National Agricultural Research Laboratories (NARL)
5. Institute of Policy Analysis and Research (IPAR)
6. National Animal Husbandry Research centre, Naivasha
7. National Arid Lands Research Centre, Marsabit
8. National Dry land Farming Research Centre, Katumani
9. National Fabre Research Centre, MweaTebere
10. National Horticultural Research Centre, Thika
11. National Plant Breeding Centre, Njoro
12. National Potato Research Centre Tigoni
13. National Pyrethrum Research Centre, Molo
14. Kenya Agriculture Research Centre- Mtwapa
15. International Centre for Insect Physiology and Ecology (ICIPE)
16. Coffee Research Foundation (CRF)
17. Tea Research Foundation
18. World Agroforestry Centre

19. Kenya forestry research institute
20. Kenya Marine and Fisheries Research Institute
21. Kenya Industrial Research and Development Institute
22. Kenya Seed Company (KSC)
23. Alliance for a Green Revolution in Africa (AGRA)

APPENDIX II: RESEARCH QUESTIONNAIRE

SECTION A: DEMOGRAPHIC INFORMATION

1. Name of the Institution (optional) _____
2. What is your institution's main line of research _____
3. Indicate the ownership of your organization
Government institute [] International NGO []
Local NGO []
4. Indicate the number of branches that your organization has _____
5. Indicate the number of employees in your organization _____
6. Number of years the Institution has been in existence
5 years and below [] 6-10 years []
11-15 years [] 16 years and above []
7. Your position in the organization _____
8. Your gender (M)____ (F)____
9. Number of years you have worked in the Organization
Below 5 years [] 6-10 years []
11-15 years [] 16 years and above []

SECTION B: CHALLENGES OF STRATEGY IMPLEMENTATION

10. Below is a list of different challenges encountered by organizations in the implementation of strategies. Kindly indicate the extent to which your organization faced these challenges in strategy implementation. Use the scale 1= Not at all, 2= little extent, 3= moderate extent, 4= great extent and 5= very great extent

Challenges	1	2	3	4	5
Limited Resources					
Inappropriate organizational structure					
Lack of conducive organizational culture					
Conflicting Inter-organizational agreements/ partnerships					
Misunderstanding and lack of trust by employees					
Coalitions and power centers within the organization					
Abrupt changes in the operating environment					
Limited top management commitment and ownership of the strategy					
Poor communication in the organization					
Competing activities distracted attention from implementing strategies					
Capabilities of employees involved were insufficient					
Uncontrollable factors in the external environment had an adverse impact on Implementation					
Leadership and direction provided by departmental managers were inadequate					
Key implementation tasks and activities were not sufficiently defined					
Advocates and supporters of the strategic decision left the organization during implementation					
Overall goals were not sufficiently well understood by employees					
Key formulators of the strategic decision did not play an active role in implementation					
Problems requiring top management involvement were not communicated early enough					

Deviation from original plan objectives					
Lack of feelings of "ownership" of a strategy or execution plans among key employees					

11. In your opinion, what other challenges does your institute face in strategy implementation?

12. To what extent have these challenges affected successful strategy implementation in your institute?

- Very great extent []
- Great extent []
- Moderate extent []
- Little extent []
- Not at all []

Thank you very much