

**INFLUENCE OF ISO 9001 CERTIFICATION ON PERFORMANCE OF  
SEED DISTRIBUTION: A SURVEY OF KENYA SEED COMPANY  
DISTRIBUTORS IN CENTRAL KENYA**

**KIPTURGO, RISPER J**

**D65/74404/2014**

**A MANAGEMENT RESEARCH PROJECT SUBMITTED IN PARTIAL  
FULFILLMENT OF THE REQUIREMENTS FOR THE AWARD OF THE  
DEGREE OF MASTER OF SCIENCE IN MARKETING, SCHOOL OF  
BUSINESS**

**UNIVERSITY OF NAIROBI**

**2016**

## DECLARATION

This research project is my original work and has not been presented for an award of a degree in any University.

Signature..... Date.....

Risper J. Kipturgo

D65/74404/2014

This research project has been submitted for examination with my approval as university supervisor

Signature..... Date.....

Dr. Joseph Owino

School of business

University of Nairobi.

## **DEDICATION**

I dedicate this project to my dear beloved husband David and children: Bethany, Solomon, Jabez and Daniel for their encouragement, prayers, and material support. I cherish their sacrifice in allowing me to pursue this study.

## **ACKNOWLEDGMENT**

I am deeply grateful to my dedicated supervisor: Dr. Joseph Owino for his prompting, encouragement, suggestions and directions which have been invaluable to me in completing this study. He has a great understanding.

Special appreciation goes to Prof Munyoki, Dr. R. Musyoka and Mr. Victor Ndambuki for their time and encouragement. Special appreciation goes to Phyllis McFarlane for her mentorship in research.

# TABLE OF CONTENTS

<b>DECLARATION</b> .....	<b>i</b>
<b>DEDICATION</b> .....	<b>ii</b>
<b>ACKNOWLEDGMENT</b> .....	<b>iii</b>
<b>LIST OF TABLES</b> .....	<b>vi</b>
<b>DEFINITION OF TERMS</b> .....	<b>vii</b>
<b>ABSTRACT</b> .....	<b>vii</b>
<b>CHAPTER ONE: INTRODUCTION</b> .....	<b>1</b>
1.1 Background of the study .....	1
1.1.1 Quality Management Systems (QMS).....	2
1.1.2 ISO 9001 Certification and Operations Performance .....	4
1.1.3 Seed Marketing in Kenya.....	5
1.2 Research Problem.....	7
1.3 Overall Objective of the Study.....	9
1.4 Value of Study.....	9
<b>CHAPTER TWO: LITERATURE REVIEW</b> .....	<b>11</b>
2.1 Introduction .....	11
2.2 Theoretical Review .....	11
2.2.1 Agency Theory.....	11
2.2.2 The Expectancy Disconfirmation Theory .....	12
2.2.3 Deming Cycle .....	13
2.3 Quality Management and Performance.....	13
2.4 Seed Distribution Systems .....	15
2.5 The Marketing Mix in the Seed Industry .....	17
2.6 Impact of 9001 ISO Certification.....	18
2.6.1 Impacts on Products .....	19
2.6.2 Impacts on Competitiveness.....	19
2.6.3 Impact on Market Activities.....	20
2.6.4 Impact on Customer .....	22
2.7 Empirical Evidence .....	24

<b>CHAPTER THREE: RESEARCH METHODOLOGY .....</b>	<b>25</b>
3.0 Introduction.....	25
3.1 Research Design.....	25
3.2 Population of Study.....	25
3.3 Sample Design .....	25
3.4 Data Collection.....	26
3.5 Data analysis .....	26
<b>CHAPTER FOUR.....</b>	<b>27</b>
<b>DATA ANALYSIS, RESULTS AND DISCUSSIONS .....</b>	<b>27</b>
4.1 Introduction.....	27
4.2 Data Presentation .....	28
4.2.1 Data Validity .....	28
4.2.2 Data Reliability.....	28
4.3 General Demographics.....	29
4.3.1 Years of Distribution.....	29
4.4 Influence of ISO 9001 .....	29
4.4.1 Influence on Seed. ....	29
4.4.2 Customer Satisfaction.....	30
4.4.3 Continual Improvement.....	31
4.4.4 Customer Complaints .....	32
4.5 Meeting Distributors Requirements .....	33
<b>CHAPTER FIVE .....</b>	<b>36</b>
<b>SUMMARY, CONCLUSION AND RECOMMENDATIONS.....</b>	<b>36</b>
5.1 Introduction.....	36
5.2 Summary of Findings.....	36
5.3 Conclusion.....	37
5.4 Recommendations for Policy Change.....	37
5.5 Limitations of the Study.....	37
5.6 Areas for Further Research .....	38
<b>REFERENCES.....</b>	<b>39</b>
<b>APPENDICES .....</b>	<b>42</b>
<b>APPENDIX I: QUESTIONNAIRE .....</b>	<b>42</b>

## LIST OF TABLES

Table 2.1: Certified Seed Distribution Channels .....	15
Table 4.1: Response Rate.....	27
Table 4.2: Cronbach’s Alpha .....	28
Table 4.3: Years in seed distribution business.....	29
Table 4.4 ISO 9001 Influence on seed quality.....	29
Table 4.5: Customer Satisfaction .....	30
Table 4.6 Continual Improvement .....	31
Table 4.7: Customer Complaints .....	32
Table 4.8: Meeting distributor’s requirements.....	34

## **DEFINITION OF TERMS**

<b>CGRFA</b>	Commission on Genetic Resources for Food and Agriculture
<b>ISO</b>	International Organization for Standardization
<b>KEPHIS</b>	Kenya Plant Health Inspectorate
<b>KSC</b>	Kenya Seed Company
<b>QMS</b>	Quality Management System
<b>STAK</b>	Seed Traders Association of Kenya
<b>TQM</b>	Total Quality Management



## ABSTRACT

Most organizations in Kenya, whether private or public have adopted a form standardization to be in conformity with international or global requirements. The adoption of ISO 9001 standards is intended to assist organizations in all sectors to operate an effective quality management system. The companies will determine the specifics of how the standards apply to their organizations. An ISO 9001 certified organization demonstrates to the customers that it has achieved a basic level of quality. The Quality Management System (QMS) promotes a process approach in determination and management of numerous linked activities in the running of an organization. The emphasis is on process approach in understanding needs and customers' requirements, the need to consider processes regarding added value, obtaining results of process performance and effectiveness that should lead to continual improvement. The Plan-Do-Check-Act (PDCA) cycle when applied at every step of decision making consistently develops quality products, satisfied customers and improved business performance.

The study sought to find out what influence ISO 9001 certification has on the performance of seed distribution in Kenya. To achieve this, a census survey was conducted on 78 Kenya Seed Company (ISO Certified) distributors (Agents) in central Kenya. The performance variables of the ISO 9001 thought to influence seed distribution in Kenya were product, customer satisfaction, continual improvement, handling of customer complaints and meeting distributor's performance. The results showed that performance of seed distribution was highly influenced by the organization being ISO 9001 certified. There is confidence in the seed supplied to the customers as well as the products being certified for traceability. Many respondents agreed to a large extent that customer expectations have been met as evidenced by the results. Under continual improvement, ISO 9001 has influenced putting up of the organizations clear quality goals in place for distributors to work with. The certification in ISO 9001 has led to improvement in distribution. There is also a significant influence on the following up customer complaints since clear guidelines on complaints resolution have been put up.

From the results of this study, recommendation is made that regular surveys be carried out to evaluate customer satisfaction and corrective action should always be taken to address customer complaints. Further the study recommends that continuous training of agents be carried out by the organization on its distributors and that a return system be put in place for non-moving seed at the distributor's shops.

# CHAPTER ONE: INTRODUCTION

## 1.1 Background of the study

The pursuit of quality is perhaps more extensive and passionate worldwide than at any time in history. Kartha (2004) observed that cultivating quality is vital for better profitability and productivity in many organizations. Tsiotras and Gotzamani (1996) opined that ISO 9000 had developed into the most widespread global quality initiative. The first publication of ISO 9000 standards was done in 1987 and revised in 1994. Again in 2000, a widespread influence of ISO 9001 certification on firm performance and modifications were introduced and the last one was in 2008. There are specific requirements in ISO 9001 for quality management system, by which a third party may certify an organization.

In some studies by Singh (2008), he observed that there were three ISO 9000 related performance contracts that included consistent quality outputs, satisfied customers, and business performance, which are the primary indicators in evaluating firm's performance. Tang (1996) indicated that consistent quality outputs indicate that: when organization's processes are in control and stable, the quality of the outputs would be uniform and consistent and organizations with documented operations and processes are in the best position to influence the quality of their products and services, Withers (1997) , Dow (1999) and Flynn (1995) explained that some of the measures used to indicate consistency in output quality are costs relating to product quality, rates of non-conforming products, product performance, and reliability levels. Further, customer satisfaction, which has been a long-sought aim for the organizations, has indications of the customer service level, perceived product quality by customers, and the number of quality audits performed by a customer if any Dow(1995).

Seed provides unique technology to agricultural production whether for commercial or subsistence farming. Productivity largely depends on the quality of seed used. The value of agricultural genetic resource lies in the seed. Seed is the vehicle for carrying genetic diversity over space and time. Therefore, to guarantee food security, quality and safe seed should be maintained. Unlike other agricultural input such as fertilizers and pesticides, the specific characteristics of seed make its delivery to farmers complicated. According to CGRFA (2011), a seed is a living organism and requires appropriate handling, processing, and storage operations to ensure that its viability is maintained until it is sown in the field.

Inadequate availability of quality seed is a significant constraint frequently identified by farmers in the rural population in many countries, though many initiatives have addressed this issue through sustainable local seed production and have resulted in improved access to appropriate, affordable and timely seeds ASFG (2011).

### **1.1.1 Quality Management Systems (QMS)**

Under the quality management systems (QMS), there exist sets of policies, processes and procedures that are required for planning and execution in areas that may impact the organization's ability to meet customer requirements (ISO 9001).

Hoyle (2005) explained that formal quality systems did not appear until early 1950's. The principal feature of quality management system is customer focus. The key objective is to endeavor to exceed customer expectations. Every touch point of customer interaction provides an opportunity to create more value for the customer. Organizations' understanding of customers' current and future needs and other

interested parties may contribute majorly to its sustained success. The key benefit of QMS according to Sakakibara et al (1995) include increased customer value, satisfaction, improved loyalty, enhanced repeat business, improved image of the organization, increased revenue, market share and increased customer base.

The global economy is becoming increasingly competitive to the extent that long-term success is often conditioned by the ability of a firm to reorganize efficiently and aggressively to improve their operations to match better environmental contingencies and to remain competitive. Companies try one management program after another, in the hopes that one will prove effective (Wayhan, et al, 2002). The global market calls for higher levels of quality, efficiency and effective delivery of service and products.

ISO 9001 ensures that certified companies maintain a QMS that provides standard operating procedures (SOPs) that enable it to carry out activities for delivering goods and services, (Ndirangu,2011). Many benefits accrue from being ISO certified as indicated by ISO survey (2007). This benefit includes efficient operations, customer satisfaction, improvement of financial results, the stakeholders' satisfaction, sustainability, continual improvement, international recognition, improved quality and image. The primary objective of QMS is customer focus. This means putting energy into satisfying customers and understanding that profitability comes from meeting customers and exceeding their expectations (ISO 9001 clause 5.2).

The companies that embrace QMS certification have a provision under clause 7.5.3 for identification and traceability of products along distribution channels. Further, preservation of product quality, handling, packaging and storage is assured under

clauses 7.5.5. Clause 8.2.1 relates to customer satisfaction and would enable a firm to constantly, monitor customer perception through customer surveys, customer data on delivered product quality use of opinion surveys, lost business analysis.

### **1.1.2 ISO 9001 Certification and Operations Performance**

The activities that make up a firm's operation are related. As a result, the organization has to decide which indicators of performance are critical to its success and then allocate the resources available on these selected characteristics. Improvement of the systems that create and deliver the firm's leading products and services will result in improved quality services and products. Costs will decrease non-conformities thus customer satisfaction will be achieved as noted by Aquilano et al (2009). Terziovski et al (2007) defined operational performance as the performance related to an organization's internal operations, for example, productivity, customer satisfaction, and product quality. ISO certification is intended to lead to advantages in the firms' processes. These benefits include such things as an improvement in throughput time, an increase in technical flexibility, improvement of coordination of activities, improvement in product or service specifications, increase in internal and external delivery performance and improvement in efficiency.

An organization operating within the requirements of the ISO 9000 standards is expected to achieve customer satisfaction since the interactions with customers is improved and reductions in consumer complaints. The standards are intended to have a positive influence on employees leading to increased motivation despite the fact that the standards increase the workload on documentation and standardization of procedures which may impede the creative thinking of employees (Singels, et al 2001). With lower

defect rates and on-time delivery, sales should grow because new markets are created and customer retention is high (Naveh & Marcus, 2005). Better operational performance, products or services that the firms' offers become more attractive to customers and the firm should have better business performance. Sales and profitability should increase (Singels, et al 2001).

### **1.1.3 Seed Marketing in Kenya**

According to (FAO, 2015), Seed marketing should aim to satisfy the farmer's demand for a sustainable supply of a number of improved seed varieties of high quality at affordable prices. However, the challenges of organizing efficient seed distribution systems, more-so to small-scale farmers, have been underestimated especially in comparison to activities in the seed industry. In the past, more attention and resources were put into the aspects of seed production and storage than to manage distribution and sales.

Marketing means many things to many people. In the agricultural sector, for example, to the retailer, it is selling to the farmer seed with other inputs. And to the farmer, it is simply selling his or her produce. Whatever the circumstances, a defined pattern has to take place to promote the product and to put it in the rightful position, timely and at the right price for a sale. Many people think of marketing only in terms of the advertising and selling of goods, yet, in reality, marketing starts long before the products exist and continue after they are sold. Therefore, for the marketing process to be successful: the farmer consumer's needs must be satisfied; the seed company's objectives must be realized.

To achieve agricultural development and poverty reduction farmers must identify and access good quality seed in the market. The seed industry in Kenya was liberalized in 1992, resulting in several local and foreign companies venturing into the seed market. To date, there are 112 companies licensed by Kenya Plant Health and Inspectorate Services (KEPHIS) to produce and sell seed in Kenya. To ensure food security in Kenya, Kenyan farmers must access good quality seed because good seeds are the essential element, from which all other food security solutions flow.

Seed marketing involves creating awareness and demand for seed through publications, brochures, training media channels, setting up farm demonstrations along strategic locations, participation in trade fairs and agricultural shows. In this way, would be farmers are made aware of the different varieties suitable for their agro-ecological zones. Seed marketing aims to satisfy the farmer's demand for a reliable supply of improved quality seed varieties at an acceptable price.

In Kenya, seed distribution is carried through a chain of appointed distributors: agents (whole sellers), sub-agents, stockists and retailers. As the seed firms seek to increase sales, market share, productivity, and profitability in the seed industry, these seed distributors play a critical role in making seed available to the end-users, close to their area of operation. The seed distributors are the key-account customers to seed firms since they purchase seed, move seed to their warehouse and sell to farmers as well as provide seed information to farmers.

## **1.2 Research Problem**

Food security and sustainability of food production in any county is highly dependent on quality of seed that is planted. In Kenya, there has been concern on low yields experienced by farmers who attribute it to the kind of seed purchased from seed distributors. It is suspected that some of the appointed seed distributors may be responsible for selling poor quality, low germinating, uncertified or counterfeit seeds (Fake), that may be responsible for poor yields at farmers' fields. This, therefore, calls for traceability of the seed through the distribution channel and the performance of distributors for quality management and identification of a possible source of the problem as provided for under clause 7.5.5 of the ISO 9001 standard.

A number of scholars have studied organizations that embraced the ISO certification over time and have come up with varying conclusions on their performance. The number of companies in Kenya which have been certified to ISO 9001 is relatively high, compared with the developed countries. Despite the number research on ISO 9001 and performance in developed countries, little information exists on ISO 9001 experiences in the developing countries, especially with the performance of distribution channel in Kenya. There is a need for research providing information about the effect of ISO 9001 certification on performance in this area.

While investigating the impact of ISO standards on 20 SME's, Rayner and Porter (1991) found that 70 percent of companies considered marketing advantage as the principal benefit: customer acquisition, customer retention and entry into the market. Street and Fernie (1992) collected the data from fifty-two certificated Scottish manufacturers to which a third purported to have experienced a growth in the customer base, while one-



quarter experienced increased sales. Tsiotras and Gotzamani (1996) conducted a survey in Greece and showed that the benefits of ISO 9001 could be categorized into "internal" and "external." The internal benefits were pointed to be the internal organization modernization and company processes, better documentation, greater employee quality awareness, enhanced internal communication, and systematic approach to personnel training. The distinct advantages were a competitive advantage, improved customer satisfaction, attraction of new customers and the increase in the company's reputation.

Vloeberghs and Bellens collected data from 689 Belgian certified companies Vloeberghs and Bellens(1996). The benefits experienced by these firms were within the organization; while the best benefit is that the formal quality management system leads to increased customer trust. Buttle's (1996) survey of 1220 certified UK companies found that improving operations and marketing benefits were claimed by most of the organizations following ISO 9001 certification. McAdam and Mckeown (1999) reported that in Northern Ireland ISO 9001 certification resulted in benefits for small organizations, the specific benefits were better control of the business, reduced costs, increased sales, improved productivity, and fewer customer complaints. Also Tan and Lim-Teck Sia (2001) investigated the benefits of ISO 9001 among one hundred Malaysian firms.

The study found a couple of benefits; improved product quality, improved communication, increased process efficiency, reduction in production costs, increased market share and improved export potential. Naser et al. (2004) did a study on the effect of ISO 9001 certification on the performance of 162 registered companies in Malaysia, and they found an association between ISO 9000 registration and performance of companies in Malaysia. Their study revealed that accredited Malaysian companies

outperformed the non-accredited ones during the period of their research. Magd and Curry of (2003) studied ISO 9001 in Egypt and concluded that the most frequent reasons for certification in Egypt were to improve the efficiency of the quality system and pressures from competitors/foreign partners.

There is no study of perception in performance in Kenya done on ISO certification on seed marketing also the influence of this certification in achieving the desired results in seed marketing and customer satisfaction. This study hence seeks to determine the impact of ISO 9001 certification on the performance of seed distribution in Kenya. Hence, the following question; what is the influence of ISO 9001 certification on the performance of seed marketing in Kenya?

### **1.3 Overall Objective of the Study**

To study the influence of ISO 9001 certification on performance of seed distribution in Kenya.

### **1.4 Value of Study**

This study would give significant insight into the role of seed distributors in maintaining seed quality and traceability which would help the management of Seed Companies gauge the influence the adoption of ISO 9001 has had on seed sales and distribution. It might also shed light on some of the challenges of seed marketing in a dynamic market place hence give possible policy recommendation for seed distribution and traceability.

The government and other relevant policy formulation organs would find this study valuable in informing their future policy development framework in as far as ISO 9001 implementation is concerned. This would pave the way for formulation and implementation of policies that support the process of ISO 9001 certification. This study would provide scholars and researchers with relevant information on the value associated with adoption of QMS and improvement of market share, customer satisfaction, and revenue maximization. It would significantly contribute to the current literature on the effect of ISO 9001 certification on seed distribution. The study would hence be used as a source of reference material and suggest areas for further research.

This study will benefit state corporations who are still yearning for quality management system certification as it will educate them on the relevance of ISO 9001 certification and its impact on the company's financial performance. Further, for organizations already certified the study will aid them to do an internal audit on the real influence of the certification to their financial performance thus enable them to undertake preventive and corrective measures to maximize the benefits generated from the certifications. Seed distribution is a sustainable business with strong support from the government. The financial sector may find this study useful in identifying areas they may wish to fund in the seed distribution chain.

## **CHAPTER TWO: LITERATURE REVIEW**

### **2.1 Introduction**

This chapter looks at the theories and contexts in ISO 9001 certification, organisational performance and seed distributors' performance. It looks at the influence of ISO certification on various areas leading towards seed distribution by Seed companies.

### **2.2 Theoretical Review**

A number of theories exist, that can explain the issues of quality management systems and seed distribution performance.

#### **2.2.1 Agency Theory**

Jensen and Meckling in his works on the Agency theory arguing that in the modern corporations, with share ownership is widely held, managerial actions deviate from those required to maximize shareholder dividends. This means managers will not act to maximize the dividends to shareholders unless proper governance setups are implemented in the large corporation to protect the interests of shareholders Jensen and Meckling (1976). Wahyan et al. (2002) held the idea that as agents for shareholders, top managers of pro-profit corporations should seek to enforce strategies that increase the value of the corporations and the wealth of these important stakeholders. Although the interests of senior managers and their stockholders sometimes have a conflict of interests (Jensen & Meckling, 1976), the same agency problem (Eisenhardt, 1989) could have been in part resolved by the recent rapid increase in stock options and incentive-based contracts for senior managers.

By aligning the seed distributor's interests of executives with those of stakeholders in these respects, top managers should now have vested interests in maximizing shareholder wealth. ISO 9001 certification is expected to enhance shareholder wealth through profitable revenue growth that increases the firm's retained earnings.

### **2.2.2 The Expectancy Disconfirmation Theory**

Smith and Houston (1982) made a claim that the expectancy disconfirmation theory is the most popular of social sciences theories. This theory argues that a relation exists between satisfaction of service and confirmation or disconfirmation of expectations. The theory asserts that satisfaction is related to direction and size of disconfirmation experience where disconfirmation is connected to one's prior expectations as per (Churchill and Suprenant(1982)).

From this theory, customers form an expectations one's product performance characteristics before purchasing. Once a product is bought, a comparison is made between the actual and the expected performance of the product. Positive disconfirmation then results if the product is better than the expected while if worse than expected, results in negative disconfirmation. A Simple confirmation results when a product or service is found to perform as expected. Satisfaction is expected to increase as positive disconfirmation increases. (Churchill, et al 1982). ISO certification is perceived as resulting in better quality thus the customers have some prior expectations when an organization is certified which with time will result to positive or negative disconfirmation of the expectations.

### **2.2.3 Deming Cycle**

A tool for continuous improvement and ongoing effort to improve product services or processes. These efforts can either have instant or gradual improvements. Amongst the most used tools for continuous improvement is a four step quality model-the plan-do-check-act (PDCA) cycle, known as Deming Cycle: Plan; Do; Check and Act.

Deming's cycle philosophy has a basis on improving products and services by reducing variability and uncertainty in the manufacturing and design processes, In Deming's view variation is the chief culprit of poor quality. Deming though focused on employees but the same can be inferred on individual distributors. For example, a distributor might show extraordinary effort beyond other distributors. Conversely another distributor might show virtually no effort which places the performance of that individual distributor significantly below the performance of others. These individual efforts have an effect on seed distribution. In seed distribution, consistent supply of stated seed quality is crucial in meeting customer requirement otherwise, conflicts in service frustrate customers and damage a corporation's image. To achieve reduced variation, Deming hence advocates a continuous cycle of product design, manufacture, test and sales, followed by market surveys, then redesign (Deming, 1991)

### **2.3 Quality Management and Performance**

Heras et al. (2001, 2002 a, b), infers to better distributors' performance as presented by ISO 9001 certified corporations. It argues that: One must consider the multitude of variables that influence can change organizations' business performance index. It is of importance that the characteristics of the samples used are analyzed in much detail, as it is possible that higher profitability of certified companies may have to cope with the

fact that certified organizations belong to activity sectors that enjoy greater profitability levels and more profitability margins verified among ISO 9001 companies and may be related to the most profitable companies being those that have much more tendency to become ISO 9001 certified. (Singels et al. (2001)) found a positive relationship between ISO certification and performance of organizations.

However, the authors have concluded that the reasons for seeking registration have a control over the organization performance. Following research results, the researchers came to a conclusion that ISO 9001 certification, based on internal motivations, results in better performance. Organizations are seen to seem still to pursue ISO 9001 certification based on outside pressures, results in a hollow achievement. Only when an organization is self-motivated for an improvement of its processes, will certification lead to a real significant improvement in its performance.

Rajaram (2008) observed that "ISO 9001 Certification had a lot of benefits like Market Competition, Consistent Quality, an increase in productivity, employee involvement, staff morale and Job satisfaction. Studies have also been conducted on the ability of ISO 9001 to achieve its primary objectives of adding value to the organization is implementing it in different economies by various sectors in particular. Pan (2003) discussed ISO 9001 implementation in some countries, namely Korea, Japan, Hong Kong and Taiwan. The study involved investigating corporations' motivation for certification, their implementations experiences and the benefits received and it was concluded that implementation of ISO 9001 in these countries was positive in general save for some differences in motivation for and benefits gained after implementing ISO 9001. Pan found that there are common factors between these named countries to go for

ISO 9001 certification, for example, external pressure, gaining a competitive edge, internal and external portions and improvement of public relations.

(Terlaak& King 2006) observed that certified organizations grow at a faster rate after certification and that operational changes do not take credit for this growth. The results also indicated that the growth effect is greater when buyers have the ability to acquire information on their suppliers. The certification may provide a means of communicating unobservable firm traits, hence generating a growth effect for certified firms. Which conclude that this advantage does not result from changes in quality performance, inventory management, within-firm production allocation, or precertification growth differences.

#### **2.4 Seed Distribution Systems**

According to (Karimi,2012), Seed distribution in Kenya typically occurs via a chain of distribution: agents (large wholesalers), sub-agents and stockists (agro-dealers).Seed is also distributed by other entities: seed companies via direct outlet sales; NGO's, Kenya government, relief seed distributors and individual farmers. There is no formal data on the volume of seed that flows through the various distribution channels, but a rough estimate based on numerous field visits and general sector knowledge in Kenya is as follows;

**Table 2.1: Certified Seed Distribution Channels**

Distribution Channel	% of total certified seed distributed
Agents/Stockists	80%
Seed Company Outlets	10%
NGOs/Projects	5%
Government	5%

Source: KEPHIS 2008



In Kenya, there are an estimated 4,000+ licensed seed resellers. In 2008/9 annual report KEPHIS issued 3,896 seed sellers' licenses to agents, sub agents and stockists. The key requirements/inputs for the agent/stockist channel are: Transportation (generally seed must be picked up from a depot), good storage (so seed can maintain quality), promotional materials and supplier credit. Features of direct channel distribution are: direct contact between supplier and the consumer, customer support and an impressive level of service can be maintained while direct control is held over the quality of the product, the upholding of such systems can be costly, with high fixed costs especially if a sales force is used. A responsive management setup and motivated staff are required. Where there are many staff involved in a direct sales organization there can be an inbuilt inertia to change. The system may lack flexibility and the revenue required to pay for the high set costs will only be obtained from having a broad range of products and achieving market shares or selling high-value products such as horticultural seeds, (Mumby 2015).

The public sector being the primary supplier of agricultural inputs, one often operates a direct marketing system. The public sector must be made aware of the need for an efficient management setup, good communications of systems and motivated staff who are responsive to the needs of the consumer. Typically, however, such public sector organizations suffer from being 'passive' rather than 'active' marketing agent.

With Single-level channels, the seed-producing organizations supply a network of retailers. To achieve national coverage, the producer requires intermediate storage to service these outlets sufficiently. The main features of this system being: reliance of seed supplier to retailer for contact to customer, strong service requirement of seed

retailer from seed supplier, good administrative control be provided from the sales management with the supplier's distribution system well organized and responsive and quality product at the retail level be monitored for non-conformity and perversion and a feedback system should be considered. Although the products may be well-promoted, the seed manufacturer relies on the retailer to make the final sale. when the infrastructure or the economy is not well developed, the national distributors may simply not be available, and the seed producer will have to supply seed to regional wholesalers or distributors.

## **2.5 The Marketing Mix in the Seed Industry**

Mumby (2015) argues that considering the needs of their customers, companies must think in terms of the product itself, the price of the product and the place where the farmer needs it, while making sure that the existence of the product is known through effective promotion. The product is the focus of marketing. Although many aspects of the product are not marketing responsibilities (such as plant breeding, seed production and processing), marketing is concerned with the product's attributes and what these mean to the farmer. Such factors include quality, appearance and performance. Price creates sales revenue and is therefore important in determining the total value of the sales made. Price is really determined by what farmers perceive as the value of seed of a particular variety.

It is important to understand how farmers value seed as well as how much they are prepared to pay in relation to the benefit they expect to earn. The place factor deals with the various methods of transporting and storing seeds and then making them available to the farmer. Getting the product to the right place at the right time depends on the

distribution system. The choice of distribution method will depend on market circumstances and the nature of both the seed and the farmer. Promotion is the business of communicating with and influencing the customer. Although the cost associated with promotion can be a significant element in the overall cost of a product, successful seed promotion increases sales so that costs are spread over a larger output.

## **2.6 Impact of 9001 ISO Certification**

Jackson and Ashton (1995) described ISO 9001 as an international standard for quality assurance, recognized throughout the world. ISO certification stands for certain minimum quality standards that organizations should meet, and is said to assure a consistent quality of products, services and processes, Singles et al.(2000).

Singles et al. (2000) also stated that ISO 9001 standards help to ensure that organizations follow specific well documented procedures in making of their products or services, and nothing more. These procedures describe how operations in an organization must be conducted. By doing this, organizations will have consistent product or services that are offered to the customers. If the products or services are consistent and meet customer specifications, then the organization will benefit from ISO certification.

These benefits, Cagnazzo et al.(2009), could then be those that are internally impact the performance of the organization or those that can externally affect the organization.

### **2.6.1 Impacts on Products**

Helmi (1998) stated that “the most important factor affecting performance is the quality of products and services relative to those of the competition, there is a direct relationship between customer satisfaction and profitability”. Quazi and Padibjo (1998) described this aspect, supporting that ISO 9000 facilitates the improvement of the product quality as well as the satisfaction of customers’ requirements. Casadesus and Jimenez (2000) highlighted other aspects in which the standard has had positive influences are: the possibility of improving the level of delivery time, the consequential savings in production cost and finally the reduction of lead time. One of the major significant improvements reported as an influential impact coming from the ISO 9000 is related to the improved product/service quality (Brown, et al. (1998) cited in Cagnazzo et al. (2009)). Ussahawanitchakit and Tansuhaj (2004) noted that by standardizing the ISO 9000 program structured and detailed procedures provide a deeper understanding of the processes involved in the supply of product or service. A better process through written procedures and instruction will reduce variability of the product. Marketing is a concept directly linked to ISO 9000 adoption. As a quality management system, ISO 9000 is concerned with improving the quality of product and services.

### **2.6.2 Impacts on Competitiveness**

Firms are moving toward ISO 9001 registration because of competitive threats. At this time, most of the pressure is not in the nature of requirements or competitive threats. Rather, it is commercial pressure arising simply from stiffening international competition and the needs of firms everywhere to differentiate among their suppliers, Johnson (1993).

It was also found that good quality control and improved conformance quality was related to competitive advantage. An active quality management system will have process control as an essential activity. Cagnazzo et al. (2009) added that another factor promoting the ISO 9001 series is the desire to improve internal efficiency by reducing waste and non-value added tasks. The ISO 9001 series is seen as tangible and has meaning and that forces organizations to develop manuals and procedures and improve organizational discipline. Generally, firms need to outperform their competitor products in the market. In order to sustain competitive advantages, firms also need to continuously increase value and prevent competitors from copying their advantages. Various previously conducted researches as identified that there are two distinct competitive advantages: low cost and differentiation.

The differentiation advantage includes quality, features, delivery, follow-up service, ease of use and so on. Cost reduction and customer satisfaction are, therefore, the main objectives of quality management. These outcomes lead to cost leadership and differentiation advantages. The manuals and procedures developed to maintain QMS builds data, which when analyzed provide insights into the progress of performance against competitors. Periodic reviews required by the ISO 9001 standard will lead to leaner manufacturing, high quality products and superior distribution. These are factors that will enable a firm to outrun competitors.

### **2.6.3 Impact on Market Activities**

The benefit of ISO certified company is that it enables them to retain their existing markets, Johnson (1993). Additionally, having a formal quality system and being assessed to a recognized standard communicates a certain commitment to quality and,

therefore to meeting customer requirements, Jackson and Ashton (1995). Market access is facilitated when the implementation of international quality standards results in the increased confidence of economic agents or regulators.

Entering new markets and establishing subsidiaries is facilitated if organizations have already voluntarily conformed to potential requirements by showing good practices and overcoming technical barriers to trade. Marketing activities are facilitated because purchasers and clients may be more easily convinced of the quality of products and services. For example, in the seed industry most suppliers and purchasers place great importance on quality and safety. Product price may even increase as a result of enhanced confidence of clients. A more flexible response to market demands is created through the internalization of the concept of consumer satisfaction that may be initiated by the ISO 9000 quality system. Through the establishment of procedures concerning impact on design and production, product variety and monitoring of market performance and competitors, a company will take better advantage of market opportunities, Schuurman (1997). Santos and Escanciano (2002) described that companies will attain the development of a more adequate commercial offer for their customer needs, which implies a marked increase in customer satisfaction and loyalty, and greater opportunities appear in the access to new markets as a result of the improvements in the commercial management. And also there is an increase in market participation and the firm acquires a strong image.

Moreover, as Cagnazzo et al. (2009) identified, the company that get ISO certification may help them in gaining access to the market and the faster reaction to the market request. The fact that ISO 9000 series certification can lead to gain access to markets,

and some of the benefits of certification can be summarized as: one important marketing implement which helps market relations, increases the possibility of obtaining new contracts and considerably helps to enter new or international markets. These are sources of performance improvement from adopting the ISO 9000 program arises from increases in revenue, as ISO 9000 certified firms are able to access new markets.

#### **2.6.4 Impact on Customer**

At the heart of a quality system is the desire to meet customer needs as fully as possible and various mechanisms built into the system help to ensure this is achieved, Jackson and Ashton (1995). Customer satisfaction is a broad concept that includes perceived evaluation of product and service. From the process approach of ISO principles, there is great potential to use it in operationalizing marketing. Working toward a process that will bring TQM and marketing together to deliver a customer focus will require changes in the way that marketing is thought of and organized, Piskar (2007). Moreover, according to Cagnazzo et al. (2009), adoption of ISO 9000 system yields visible and concrete benefits to organizations in the form of increased customer satisfaction.

Feng, et al (2007) examined the relationship of ISO 9001:2000 Quality System certification with operational and business performance in Australian and New Zealand-based Manufacturing service companies found out that ISO 9001 certification has a positive and significant effect on operational performance, but a positive weak effect on business performance. They therefore concluded that ISO 9001 certification by itself does not lead to improvement in business performance. Wayhan, et al (2002) conducted a study on financial performance implication of ISO 9001 certification. Survey results

indicated that ISO 9001-certified companies expected to gain a competitive advantage over their non-certified rivals, as evidenced by superior financial performance. This suggests that ISO 9001 certification should only be implemented when a compelling reason for certification is evident. This indicates that certification should be seen as a long-term investment.

Najmi and Kehoe (2001) in their study, the role of performance measurement systems in promoting quality development beyond ISO 9001 concluded that performance measurement systems, in addition to providing a quantitative view of the business impact of the quality development process also provides a motivation to the developmental process itself. The role of the performance measurement systems in indicating the change in performance between the development up to achieving ISO 9001 and the benefits in moving beyond certification was found to be very critical. The application of the model of performance measurement was evaluated from a survey of industrial organizations using a questionnaire which were sent to 1,050 manufacturing companies within six sectors in the UK.

Kimani (2008) carried out a study on the Role of ISO 9001 Certification in developing competitive advantage for Kenyan Organizations. The study was done using a descriptive survey that targeted all firms that had been certified by end of July 2007. The data was collected using a questionnaire. The result showed that certification to ISO 9001 is a source of competitive advantage to the Kenyan firms over their rivals. A certified firm has developed unique resources inform of enlighten human resources and a robust management system structures. It further ascertained that the benefits of



certification clearly outweigh the challenges such as the high cost on regular surveillance audits.

## **2.7 Empirical Evidence**

Lafuente, et al (2009) carried out a study on the impact that ISO certification and ownership structure have on firm performance. Their findings showed that firms producing intermediate goods that had implemented just-in-time practices were more likely to adopt ISO certification. Furthermore, there was reported strong influence of the ownership structure upon ISO adoption policy, especially when a multinational firm is the largest shareholder. Empirical evidence supported that ISO certification and ownership structure positively impact firm performance. Their results indicated that the positive impact of ISO certification on performance diminished in firms where ownership is highly concentrated.

## **CHAPTER THREE: RESEARCH METHODOLOGY**

### **3.0 Introduction**

The chapter describes research design, population of the study, data collection instruments and the techniques for data analysis.

### **3.1 Research Design**

The study adopted a cross-sectional descriptive survey design as described by Cooper & Schindler (2003). The cross sectional descriptive design describes and defines the subject, by creating a profile of seed distributors through the collection of data and tabulation of the frequencies on research variables or their interaction.

### **3.2 Population of Study**

The population of the study comprised all the appointed seed distributors in Central Kenya (seed agents). According to Kenya plant health services (KEPHIS), the body that licenses seed agents, Central Kenya has 78 duly Kenya seed distributors and all of them were surveyed in the study. The agents order seed directly from Kenya Seed Company and sell to stockiest and farmers.

### **3.3 Sample Design**

In Central Kenya there were 78 appointed seed distributors (seed agents) and all of them were surveyed making a study census.

### **3.4 Data Collection**

Primary data was used in the study whereby the respondents were the distributors of Kenya Company limited in Central Kenya. Self-managed questionnaires were used to collect data from respondents who volunteered the information. These questionnaires were accompanied with a letter introducing the researcher and explained the purpose of the study. A “drop-and-pick-up later” method was used to administer the questionnaires. This method was considered appropriate in view of the fact that most of the distributors are in major towns of Central Kenya.

The questionnaire was structured in three sections as follows: Section A contained questions on general information about the distributors under the study; Section B comprised questions on the influence of ISO 9001 on the performance of seed distribution; Section C comprised questions on distributors performance which were all used to answer the overall objective of the study.

### **3.5 Data analysis**

The data obtained through the questionnaires were checked for completeness. The questionnaires were coded after receipt then, the data was entered into the Statistical Package for Social Sciences (SPSS) version 21 for analysis and generation of reports. The data report was generated from Descriptive statistics. The descriptive statistics mainly included mean scores, percentages and ratios. The data is presented using tables for easier of interpretation.

## CHAPTER FOUR

### DATA ANALYSIS, RESULTS AND DISCUSSIONS

#### 4.1 Introduction

This chapter gives the analysis of primary data collected from the administered questionnaires. After the collection of data, the questionnaire was coded in the Statistical Package for Social Sciences (SPSS) v.21 to create a template for data entry. Once the questionnaire was coded the data collected was keyed into the SPSS software for analysis. Right before the analysis data cleaning and editing was done for consistency and completeness. Descriptive statistics such as means and standard deviation were used to analyze data.

**Table 4.1: Response Rate**

<b>Response rate</b>	<b>frequency</b>	<b>Percentage</b>
Completed	60	76.92%
Incomplete	18	23.08%
<b>Total</b>	<b>78</b>	<b>100%</b>

Source: Author, 2016.

A total of 78 questionnaires were administered. The questionnaires contained questions that addressed the objectives of the study. The objective of the study is to study the influence of ISO 9001 certification on performance of seed distribution in Kenya.

## 4.2 Data Presentation

### 4.2.1 Data Validity

The researcher issued six questionnaires to six Kenya seed company distributors so as to conduct a pilot test. The research tool was piloted before being administered to ensure simplicity and precision of the grammar of the questionnaire so as to avoid misinterpretations and also to avoid research bias, detect ambiguous questions, and to pick out in advance any problems in the methods of research. This helped to make the data used in the analysis valid.

### 4.2.2 Data Reliability

To test the reliability of the Likert scale used in this study, reliability analysis was done using Cronbach's Alpha as the measure. A reliability coefficient of  $\alpha \geq 0.7$  was considered adequate. The output of the reliability analysis is as shown in Table 4.2.2

**Table 4.2: Cronbach's Alpha**

<b>Reliability Statistics</b>		
<b>Cronbach's Alpha</b>	<b>Cronbach's Alpha Based on Standardized Items</b>	<b>N of Items</b>
0.823	0.835	60

Source: Research Data (2016).

In this case, a reliability coefficient of 0.823 was registered indicating a high level of internal consistency for the likert scale used in this study. This indicated that the scale was reliable enough to test the extent to ISO 9001 influenced distribution of seed in Kenya Seed Company Limited.

### 4.3 General Demographics

#### 4.3.1 Years of Distribution

**Table 4.3: Years in seed distribution business**

	<b>Frequency</b>	<b>Percentage</b>
3 years and below	2	3.3
4 – 6 years	4	6.7
7 – 9 years	10	16.7
10 years and above	42	70
Missing	2	3.3
<b>Total</b>	<b>60</b>	<b>100</b>

Source: Author, 2016.

### 4.4 Influence of ISO 9001

In this section, the study sought to know the extent to which the Kenya seed company distributors have benefited as a result of the company being ISO 9001 certified. Data analysis of was carried out using means and standard deviation. The influences were rated on a scale of 1-5 where: 1=No extent, 2=Little Extent, 3=Moderate Extent, 4=Large Extent, 5=Very large Extent. The results of the study are as discussed below:

#### 4.4.1 Influence on Seed.

On the extent on influence of ISO 9001 certification on seed, the results of the study are as shown in table 4.4 below

**Table 4.4 ISO 9001 Influence on seed quality**

<b>Influence on product(seed)</b>	<b>Mean</b>	<b>Std. deviation</b>
The product has reduced variability	4.02	1.295
The products are better compared to competitors	4.36	0.873
The products supplied are non-conforming	1.40	0.840
The products are certified for traceability by use of lot numbers	4.67	0.824
Customers have confidence in the seed supplied to you	4.95	0.227
<b>Overall Mean</b>	<b>3.88</b>	<b>0.812</b>

Source: Author's Research Data (2016).

An overall mean of (M=3.88, SD=0.812) was registered indicating that the influence on product (seed) was rated to a moderate extent. Confidence in the seed supplied to the customers was rated to a large extent as indicated by (M=4.95, SD=0.227). It was followed up by the products being certified for traceability with a mean of (M=4.67, SD=0.824) indicating that it was rated to a large extent. However, the respondents' opinions were varying as evidenced by the standard deviations recorded.

#### 4.4.2 Customer Satisfaction

The results on the extent to which ISO 9001 certification has influenced Customer Satisfaction are as shown in the table below. Customer Satisfaction was rated on a scale of 1-5 where: 1=No extent, 2=Little Extent, 3=Moderate Extent, 4=Large Extent, 5=Very large Extent. The results of the study are as discussed below;

**Table 4.5: Customer Satisfaction**

<b>Customer Satisfaction</b>	<b>Mean</b>	<b>Std. deviation</b>
Regular surveys are carried out to evaluate customer satisfaction	3.97	1.041
Market studies are carried out to determine customer needs and wants	4.03	0.938
There are systems to collect complaints	3.40	1.028
The corrective action always taken to address customer complaints	3.62	0.885
Your expectation as a customer has been met	4.27	0.972
<b>Overall Mean</b>	<b>3.86</b>	<b>0.973</b>

Source: Research Data (2016).

The study established that there is customer satisfaction in the distribution of seed. Many respondents agreed to a large extent that customer expectation has been met as evidenced by a mean of (M=4.27, SD=0.972) followed by the statement that market studies are usually carried out to determine customer needs and wants (M=4.03, SD=0.938) indicating it was rated to a large extent.

The statement that “there are systems to collect complaints” was the least rated (M=3.40, SD=1.028) indicating that it was done to a moderate extent.

Overall customer satisfaction was rated to a moderate extent as evidenced by (M=3.86, SD=0.973).

The respondents however showed varying opinions as seen from the standard deviations. Respondents varied more under the statement regular surveys are carried out to evaluate customer satisfaction as supported by the standard deviation of 1.041. Their responses varied least under the statement that corrective action always taken to address customer complaints with standard deviation 0.885.

#### 4.4.3 Continual Improvement

The findings of the study on the extent of the influence of ISO 9001 certification on the Continual Improvement in seed distribution are as shown in the table below. The Continual Improvement in seed distribution was rated on a scale of 1-5 where: 1=No extent, 2=Little Extent, 3=Moderate Extent, 4=Large Extent, 5=Very large Extent. The results are as discussed below;

**Table 4.6 Continual Improvement**

<b>Continual Improvement</b>	<b>Mean</b>	<b>Std. deviation</b>
There are clear quality goals put in place	4.28	1.031
There are regular inspections and system quality audits	3.88	1.019
There is a continuous training support to agents	3.15	1.300
The effectiveness of the trainings undertaken are always assessed	3.22	1.180
There are regular improvements in the distributions systems	4.05	1.109
<b>Overall Mean</b>	<b>3.72</b>	<b>1.128</b>

Source: Research Data (2016).



The study established that respondents' agreed to a moderate extent regarding continual improvement in seed distribution (M=3.72, SD=1.128). The statement that there are clear quality goals put in place was rated to a large extent as evidenced by (M=4.28, SD=1.031) followed by regular improvements in the distributions systems with a mean of (M=4.05, SD=1.109) indicating it was rated to large extent.

Under continuous training support to agents the respondents agreed to a moderate extent as evidenced by (M=3.15, SD=1.300) and varying opinions as seen from the by the standard deviations in the table above.

The significant standard deviations recorded indicated that the responses were greatly spread-out from the mean.

#### 4.4.4 Customer Complaints

The findings of the study on the extent of influence of ISO 9001 certification on Customer complaints was rated were as follows. The Customer Complaints was rated on a scale of 1-5 where: 1=No extent, 2=Little Extent, 3=Moderate Extent, 4=Large Extent, 5=Very large Extent.

**Table 4.7: Customer Complaints**

<b>Customer Complaints</b>	<b>Mean</b>	<b>Std. deviation</b>
There are clear guidelines on customer complaints resolution	3.13	1.186
Customer complaints are followed up	3.25	1.202
The customer complaints are resolved promptly	2.95	1.307
There is feedback on receipt of complaints	2.92	1.319
There is review on corrective action taken	2.75	1.174
<b>Overall Mean</b>	<b>3.000</b>	<b>1.237</b>

Source: Research Data (2016).

On the statement regarding Customer complaints the respondents agreed to a moderate extent as evidenced by the overall mean of (M=3.000, SD=1.237). The statement Customer complaints are followed up was the most rated with a mean of (M=3.25, SD=1.202) followed by there are clear guidelines on complaints resolution with mean of (M=3.13, SD=1.186).

Review on corrective action taken was the least rated with the mean (M=2.75, SD=1.174) indicating that most respondents rated it to a little extent.

This showed that most respondent's customer complaints were being followed up. On the other hand, the respondents had most varying opinions under the statement there is feedback on receipt of complaints with a standard deviation of 1.319 while they had least varying opinions on review on corrective action taken.

#### **4.5 Meeting Distributors Requirements**

The study sought to establish the influence of ISO 9001:2008 certification on performance of seed distribution in Kenya. Respondents were asked to indicate the extent to which distributors requirements were met due to the seed companies being ISO 9001 certified. The Distributors requirements meeting were rated on a scale of 1-5 where: 1=No extent, 2=Little Extent, 3=Moderate Extent, 4=Large Extent, 5=Very large Extent. The results are as discussed below:

**Table 4.8: Meeting distributor’s requirements**

<b>Meeting Distributors Requirements</b>	<b>Mean</b>	<b>Std. deviation</b>
There is active and regular seeking of inputs to identify our needs and expectations	4.07	0.915
There are constant follow-ups of distributors needs so as to inform the company on its production activities	4.20	0.798
Distributors are asked to give the company on its production activities	4.07	0.880
There is systematic and regular researches on customer satisfaction	3.93	1.148
Distributors complaints are used as input to improve the organizations processes	4.07	0.861
There is a well-organized supplier's distribution system	4.18	0.782
Direct control is maintained over the quality of the product	4.20	0.833
Product quality at the retail level is well monitored for deterioration and adulteration	3.96	0.981
A return system has been put in place for non-moving seed	3.37	1.508
There is reduction in the lead time	4.24	0.999
<b>Overall Mean</b>	<b>4.03</b>	<b>0.971</b>

Source: Research Data (2016).

The study established that distributors performance was rated to a large extent as evidenced by the overall mean of (M=4.03, SD=0.971). The most rated statement was that of, there is a reduction in the lead time with a mean of (M=4.24, SD=0.999) indicating that as many respondents agreed there was a reduction in the lead time. Constant follow-ups of distributors need so as to inform the company on its production activities, direct control is maintained over the quality of the product were also rated to a large extent as supported by (M=4.20, SD=0.798), (M=4.20, SD=0.833) respectively.

The statement on return system has been put in place for non-moving seed was the least rated as evidenced by ( $M=3.37$ ,  $SD=1.508$ ) showing that it was rated to a moderate extent.

The responses however varied as supported by the standard deviations in the table shown above.

## **CHAPTER FIVE**

### **SUMMARY, CONCLUSION AND RECOMMENDATIONS**

#### **5.1 Introduction**

This chapter discusses the summary of findings, the conclusions drawn by the study, recommendations for policy change and suggestions for future research. major limitations of the study are presented. The study sought to determine the extent to which ISO 9001 certification has influenced the performance of seed distribution in Kenya.

#### **5.2 Summary of Findings**

The study sought to establish the influence of ISO 9001 certification on performance of seed distribution in Kenya. The performance variables of ISO 9001 influencing seed distribution in Kenya included; the product, customer satisfaction, continual improvement, handling of customer complaints and meeting distributor's performance. The study revealed that performance of seed distribution was highly influenced by the organization being ISO 9001 certified. There is confidence in the seed supplied to the customers as well as the products being certified for traceability. To a large extent several respondents agreed that customer expectations have been met as evidenced by the results. Under continual improvement ISO 9001 has influenced putting up of the organizations clear quality goals in place for distributors to work with. There has been a regular improvement in the distributions systems as a result of the certification. There has been a great influence on the following up customer complaints since clear guidelines on complaints resolution have been put up. The study revealed that performance of seed distribution was highly influenced by the organization being ISO 9001 certified. There is a reduction in the lead, constant follow-ups of distributors needs

are done so as to inform the company on its production activities and there is maintaining of direct control over the quality of the product.

### **5.3 Conclusion**

The study sought to determine the extent to which ISO 9001 certification has influenced the performance of seed distribution in Kenya. The study concludes that ISO 9001 certification has had a positive influence on performance of seed distribution in Kenya. The influences lies more on confidence in the seed supplied to the customers, continual improvement and regular improvement in the distributions systems with a reduction in the lead time. There is a well-organized supplier's distribution system with the organization having a direct control over the quality of the product.

### **5.4 Recommendations for Policy Change**

This study recommends the following measures to ensure good performance of seed distribution in Kenya. Regular surveys are to be carried out to evaluate customer satisfaction; a corrective action should always be taken to address customer complaints. In addition, the study further recommends that continuous training of agents should be carried out by the organization on its distributors. The study also recommends that review on corrective action should be done as well as having a return system in place for non-moving seed at the distributor's shops.

### **5.5 Limitations of the Study**

The respondents viewed the information sought on distribution as exclusive and confidential. Most of the respondents approached were hesitant in volunteering information fearing that the information sought would be used by their competitors to

their disadvantage or create a negative image on them. The researcher handled the problem by carrying an introduction letter from the university so as to assure them that the information will be treated as confidential and will be used purely for academic purposes.

The study mainly depended on the data provided by the respondents. This means that the accuracy of the data provided depended on the information provided. The respondents handled the challenge by making calls to make clarifications.

The main challenge the researcher encountered was that respondents had busy working schedules thus delaying the completion of the data collection process. The researcher exercised greatest patience and made extra effort in reminding the respondents to fill in the data. Constant follow-ups so as to acquire sufficient data from respondents was made.

### **5.6 Areas for Further Research**

The following directions for future research should be adopted in relation to ISO 9001 certification on performance of seed distribution in Kenya; Seed companies collaborating in training their customers and exploring cheaper ways of passing information using the modern day technology.

A study could also be carried on the effect of having data analyzed so as to look at the cyclicness of the weather and its impact on distribution of seed. A study on having an effective seed return system put in place for the distributors to utilize so as to ensure that their resources are not tied down in addition to avoiding defamation of the company's brand name if the seed lost viability while in their storage.

## REFERENCES

- ASFG. (2011). *Former Group Improving Quality Seed Supply Development and Viable Community Seed Businesses*. African Mall Holder.
- B Withers, M. E. (1999). Exploding the Myth: Do all Quality Management Practices Contribute to Superior Quality Performance. *Production and Operations Management*, 8(1), 1 - 27.
- Babbie, E. (2011). *The Basics of Social Research*. Belmont CA: Thomson/Wadsworth.
- Bell M, O. (2011). Quality System Implementation Process for Business Success. *International Journal of Quality and Reliability Management*, Volume 28(7).
- Cagnazzo I, T. P. (2009). *Impact of ISO 9000 on Business Performance: A Literature Review*. www.wseas.us. Retrieved October 6, 2016, from www.wseas.us/elibrary/conferences/2009/teneri
- Casadesus M., k. S. (2011). Synergies in Standardized Management Systems: Some Empirical Evidence. *TQM Journal*, 23(1), 73 - 86.
- CGRFA. (2011). *Strengthening Seed System*. Rome: Gap Analysis of the Seed Sector, Thirteenth Regular Session Rome. Retrieved October 2, 2016
- Churchill G.A., and Suprenant C., (1982); An investigations into the determinants of Customer satisfaction; *Journal of marketing research*, 19, November, 491-504
- D., Hoyle. (2005). *Quality Systems handbook*. Oxford: Jordan Hill.
- Dow D., S. D. (1999). Exploding the Myth: Do all Quality Management Practices Contribute to Superior Quality Performance. *Production and Operations Management*, 1- 27.
- Eisenhardt, K. (1989), Agency theory: an assessment and review, *Academy of Management Review*, 14, pp. 57-74.
- Feng M., T. M. (n.d.). relationship of ISO 9001:2000 Quality System Certification with Operational and Business Performance. *Journal of Manufacturing technology Management*, Volume: 19(Issue: 1), 22 - 37.
- Flynn B., S. a. (1995). The Impact of Quality Management Practices on Performance and Competitive Advantage. *Decision Sciences*, Vol. 26(Issue 5), 659 - 691.
- Heras I, D. G. (2002). Registration's Impact on Sales and profitability - A Longitudal Analysis of Performance after Accreditation. *International Journal of Quality and Reliability*, Vol 19(6), 774 - 791.
- ISO 9001:2008(E). (n.d.). Quality management systems — Requirements. Geneva: The International Organization for Standardization.
- Jensen, M. and Meckling, W. (1976), "Theory of the firm: managerial behavior, agency costs, and ownership structure", *Journal of Financial Economics*, Vol. 3 No. 4, pp.305-60.



- Karapetrovic, E. H. (2005). Measuring Performance: The Erosion of ISO 9001 Benefits: A Temporal Study. *International Journal of Quality and Reliability Management*, 22(2), 120 - 136.
- Kartha, C. P. (2004). A comparison of ISO 9000:2000 quality system standards, QS9000, ISO/ TS 16949 and Baldrige criteria. *The TQM Magazine*, 16(5),
- Kimani J., G. (2008). *The Role of ISO 9001 Certification in Development Competitive Advantage for Kenyan Organisations*. Nairobi: University of Nairobi (Unpublished).
- Lafuente E., Bayo-Moriones A., and Garcí'a-Cestona M., (2009): ISO-9001 Certification and Ownership Structure: Effects upon Firm Performance: *British Journal of Management*, Vol. 21, 649–665 (2009)
- Lynn B. F, S. R. (2004). The Impact of Quality Management Practices on Performance and Competitive Advantage. *Decisions Sciences*, Vol 26(Issue 5), 659 - 691.
- Najmi M., and Kehoe D.J, (2001), "The role of performance measurement systems in promoting quality development beyond ISO 9001", *International Journal of Operations & Production Management*, Vol. 21 Iss: 1 pp. 159 - 172
- Organization, I. S. (2008). *Quality Management Systems Requirements*. International Standards Organisation.
- Pan, J. N. (2003), —A comparative study on motivation and experience with ISO 9001 and ISO14001 Certification among Far Eastern Countries, *Industrial Management and Data Systems Journal*, Vol. 103 (8), p.564-578.
- Quazi HA, Padibjo SR (1998). "A journey towards total quality management through ISO 9000 certification" – a study on the small and medium sized enterprises in Singapore", *Int. J. Qual. Reliab. Manage.* 15(5):489-508
- Rajaram S, Siva KM (2008). *Total Quality Management*. 10th edition. New Delhi. India: Himal Impressions. Print. Pp 118-124
- Rayner, P., Porter, I. J. (1991). BS 5750/ISO 9000 the experience of small and medium sized firm's. *International Journal of Quality & Reliability Management* 8(6):p.16-28.
- Singels J., R. G. (2001). Certification and Performance. *International Journal of Quality and Reliability Management*, Volume 18, 62 - 75.
- Singh, p. (2008). Empirical assessment of ISO 9000 Related Management Practices and Performance Relationships. *International Journal of production Economics*, 40 - 59.
- Tang, V. T. (1996). Strategic Quality Management. *European Quality Awards and ISO 9000 Certification: Core Concepts and Comparative Analysis*, 13(4), 8 - 38.

- Terlaak A. & King A (2006). The effect of certification with the ISO 9000 quality management standard. A signaling approach: Retrieved from [http://mba.tuck.dartmouth.edu/pages/faculty/andrew.king/docs/ISO\\_9KSignaling.pdf](http://mba.tuck.dartmouth.edu/pages/faculty/andrew.king/docs/ISO_9KSignaling.pdf)
- Terziovski M, S. D. (1997). The Business Value of Quality Management Systems Certification: Evidence from Australia and New Zealand. *Journal of Operations Management* , 1 - 18.
- Terzioyski D., S. a. (1995). The Impact of ISO 9000 Certification on Customer Satisfaction. *Asia Pacific Journal of Quality Management, Vol 4*(Issue 2), 66 - 68.
- Vloeberghs, D., Bellens, J. (1996). ISO 9000 in Belgium: experience of Belgian quality managers and HRM. *European Management Journal* 14 (2):p. 207-211
- Wahyan VB, K. E. (2002). ISO 9001 Certification. The Financial Performance Implications. *Total Quality Management, 13*(2), 217 - 231.

## APPENDICES

### APPENDIX I: QUESTIONNAIRE

This questionnaire has been designed to assist the researcher collect data. The research project is: “Influence of ISO 9001:2008 certification on performance of seed distribution in Kenya: a survey of Kenya seed company distributors in central Kenya. “You have been identified as one of the respondents in the study and are requested to complete the following questionnaire. The information you provide will be used only for the purpose of this study and will be held strictly confidential and in no way will your name or answers be revealed out. Please answer all the questions as best as you can.

#### SECTION A: GENERAL INFORMATION

1. Name of the Distributor .....
2. How long have been distributing seed for Kenya Seed Company Limited?
  - 3 Years and below..... [ ]
  - 4-6 Years..... [ ]
  - 7-9 Years..... [ ]
  - 10 Years and above..... [ ]

**SECTION B: INFLUENCE OF ISO 9001 ON PERFORMANCE OF  
DISTRIBUTION**

1. How do you rate the product (seed) you distribute? Tick as appropriate using the following Likert scale of 1-5 where: 1= No Extent; 2= Little Extent; 3= Moderate Extent; 4= Large Extent; 5=Very Large Extent.

<b>Influence on product(seed)</b>	1	2	3	4	5
1. The product has reduced variability					
2. The products are better compared to competitors					
3. The products supplied are non-conforming					
4. The products are certified for traceability by use of lot numbers					
5. Customers have confidence in the seed supplied to you.					

2. To what extent do you agree with the following statements regarding customer satisfaction: Tick as appropriate using the following Likert scale of 1-5 where: 1= No Extent; 2= Little Extent; 3= Moderate Extent; 4= Large Extent; 5=Very Large Extent.

<b>Customer satisfaction</b>	1	2	3	4	5
1. Regular surveys are carried out to evaluate customer satisfaction					
2. Market studies are carried out to determine customer needs and wants					
3. There are systems to collect customer complaints					
4. The corrective action always taken to address customer complaints					
5. Your expectation as a customer has been met					

### 3. Continual improvement

To what extent do you agree with the following statements regarding continual improvement in seed distribution: Tick as appropriate using the following Likert scale of 1-5 where: 1= No Extent; 2= Little Extent; 3= Moderate Extent; 4= Large Extent; 5=Very Large Extent.

<b>Continual improvement</b>	1	2	3	4	5
1. There are clear quality goals put in place					
2. There are regular inspections and system quality audits					
3. There is continuous training support to agents					
4. The effectiveness of the trainings undertaken are always assessed.					
5. There are regular improvements in the distribution systems.					

4. **Customer complaints**

To what extent do you agree with the following statements regarding customer complaints: Tick as appropriate using the following Likert scale of 1-5 where: 1= No Extent; 2= Little Extent; 3= Moderate Extent; 4= Large Extent; 5=Very Large Extent

<b>Customer complaints</b>	1	2	3	4	5
1. There are clear guidelines on customer complaints resolution					
2. Customer complaints are followed up					
3. The customer complaints are resolved promptly					
4. There is feedback on receipt of complaints					
5. There is review on corrective action taken					

## SECTION C: DISTRIBUTORS PERFORMANCE

To what extent do you agree with the following statements regarding distribution of seed? Tick as appropriate using the following Likert scale of 1-5 where: 1= No Extent; 2= Little Extent; 3= Moderate Extent; 4= Large Extent; 5=Very Large Extent.

6.

<b>Meeting Distributors Requirements</b>	1	2	3	4	5
1. There is active and regular seeking of inputs to identify our needs and expectations					
2. There are constant follow-ups of distributors needs so as to inform the company on its production activities					
3. Distributors are asked to give the company feedback on quality and delivery performance					
4. There is systematic and regular researches on customer satisfaction					
5. Distributors complaints are used as input to improve the organizations processes					
6. There is a well-organized supplier's distribution system					
7. Direct control is maintained over the quality of the product					
8. Product quality at the retail level is well monitored for deterioration and adulteration					
9. A return system has been put in place for non-moving seed					
10. There is reduction in the lead time					