

**CHALLENGES FACING THE PERFORMANCE OF AGRICULTURE
INSURANCE IN KENYA**

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DECLARATION

This research project is my original work and has not been presented for a degree in any other university.

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DEDICATION

I dedicate this project to my lovely family for their encouragement and support all through my life.

ABSTRACT

Agricultural Insurance aims at protecting the agriculturist against financial losses due to uncertainties that may cause agricultural losses arising from named or unforeseen perils beyond farmer's control. This study was set to determine the challenges facing the performance of agriculture insurance in Kenya.

The study was conducted on the insurance companies dealing with general insurance. Data was collected using questionnaires which were hand delivered to insurance companies targeting underwriting managers in self addressed envelopes. Some questionnaires were emailed to the specific managers in the different companies to the convenient of the respondents. The results were analysed using descriptive cross sectional design as well as co-relational research due to the qualitative nature of the data.

The key findings from the study shows that agriculture risks are systemic in nature and therefore affect a large number of farmers in the same geographical area therefore posing a major challenge to local insurance companies since such risks can seriously affect the financial solvency of a company. Adverse Selection and Moral Hazard is another major challenge facing agriculture insurance. The existence of government emergency aid in case of crop failures pose as financial solution to farmers therefore denying them to the need to take agriculture insurance.

Other findings from the study were limited access to international reinsurance markets therefore denying the local companies the capacity to underwrite agriculture insurance. Poor agricultural risk infrastructure results in poor pricing of agriculture and lack of historical data necessary to undertake proper underwriting of agriculture risks, low risk awareness and lack of insurance culture amount to some of the major challenges facing this class of insurance.

The findings of this study are important because they will assist in developing policies that will ensure that agriculture insurance is embraced in Kenya. This include introducing favorable strategies that will result in increased adoption of agriculture insurance therefore protecting the numerous, vulnerable, small and marginal farmers from hardships therefore bringing in stability in the farm incomes and increase in farms production.

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CHAPTER ONE: INTRODUCTION

1.1 Background of the Study

1.1.1 Performance of Agriculture Insurance in Kenya

Agricultural Insurance is a means of protecting the agriculturist against financial losses due to uncertainties that may cause agricultural losses arising from named or all unforeseen perils beyond farmer's control. Agricultural insurance is seen as one of the best strategies to address farm risks and encourage farmers to embrace modern production practices with greater potential for better and quality yields. Unfortunately, agricultural insurance in Kenya has not made much headway even though the need to protect Kenyan farmers from agriculture variability has been a continuing concern of agriculture policy.

Agricultural insurance is one method by which farmers can stabilize farm income and investment and guard against disastrous effect of losses due to natural hazards or low market prices. Crop insurance not only stabilizes the farm income but also helps the farmers to initiate production activity after a bad agricultural year. It cushions the shock of crop losses by providing farmers with a minimum amount of protection. It spreads the crop losses over space and time and helps farmers make more investments in agriculture.

The gross premium for the overall insurance industry in Kenya in the year 2004 and 2009 was 2.6% and 2.84% of the GDP respectively. Life insurance recorded a penetration ratio of 0.94% in 2009 compared to 0.87% in 2008 while that of non-life insurance where agriculture insurance falls was 1.90% in 2009 compared to 1.76% in 2008. Agriculture insurance is grouped as miscellaneous business which accounted to 2.33% of the total revenue earned by the insurance industry in 2009 of 43bn (AKI, 2004 & 2009). Compared to other countries in Africa like South Africa whose gross premium was 12.9% of the GDP, the penetration of insurance in Kenya is still very low. Africa produced only 1.94% of the global premium volume in 2009 South Africa being the dominant market accounting for 90% of the premium volume. (Swiss Re, 2009)

Given the very low incomes, the small sizes of holdings aimed at subsistence production, large scale ignorance and poverty and the adverse view of other people's experiences with activities of

insurance companies in other sectors, peasant farmers are generally reluctant to patronize the insurance market, let alone willingly forgo a small payment in the form of premiums in exchange for their farm risks (Olubiyo et al, 2009)

According to Morris (WFP, 2005) farmers could feel secure enough to make higher risk, higher return investments in seeds and fertilizer and that would increase their chance of becoming self-sufficient and less dependent on emergency aid.

1.1.2 Agriculture Sector in Kenya

The agricultural sector contributes about 24 per cent of GDP and about 19 per cent of the formal wage employment. An estimated 60 per cent of all households are engaged in farming activities, and 84 per cent of rural households keep livestock. Through linkages with agro based sectors and associated industries, the sector also indirectly contributes a further 27 per cent to the country's GDP (Tegemeo, 2008).

Given the importance of the sector to the economy, its dismal performance especially on productivity has remained of much policy concern. The sub-optimal performance of the sector is manifested in low levels of employment and incomes, regional inequalities, and food insecurity. The national food price stability cannot be realized in the context of highly unstable world market prices unless Kenya controls a substantial degree of the food supplies domestically. Local factors that constrain agricultural production include over-reliance on rain-fed agriculture, erratic droughts and floods, not withstanding high production costs and lack of access to credit.

Key policy goals needed to improve agricultural production include increased resource allocations, exploiting irrigation potential, commercializing agriculture, reviewing comprehensively the legal and policy framework for agriculture, and improving governance in key agriculture institutions, especially cooperatives and farmer organizations. The development of arid and semi-arid areas (ASALs) remains a major challenge. Land sub-division and lack of a comprehensive land use policy is also an outstanding challenge for rural development. Special attention is needed to address problems of pastoral land tenure relations with agro-based farmers as it has implications for sustained agricultural development.

1.1.3 Insurance Industry in Kenya

Insurance penetration in Kenya is very low since the gross premium for the overall insurance industry in Kenya in 2009 was 2.84% of the Gross Domestic Product (GDP) compared to other countries in Africa like South Africa whose gross premium was 12.9% of the GDP. Over the years, Kenya's insurance industry has continued to endear itself to the existing and potential customers through new products and a significant improvement on its service delivery platforms, guaranteeing consumers of world-class services delivery. The creation of the Insurance Regulatory Authority (IRA) to replace the office of the Commissioner of Insurance under the Ministry of Finance has not only instilled a sense of confidence in the regulatory framework in the industry but has also injected new approaches to ethics, management and growth of the insurance investments in Kenya.

There are 44 licensed insurance companies at the end of 2009 but the number has now reduced to 40 in 2010. Twenty companies wrote non-life insurance business only, nine wrote life insurance business only while fifteen were composite (both life and non life). There were 137 licensed insurance brokers, 21 medical insurance providers (MIPs) and 3,076 insurance agents. Other licensed players included 106 investigators, 57 motor assessors, and 18 loss adjusters, 2 claims settling agents, 5 risk managers and 26 insurance surveyors (AKI, 2009).

Insurers are not only keen on reclaiming the rightful image of the industry but are further concerned with vilifying and alienating, rogue practitioners who have helped plant the seed of distrust that continues to slow penetration of insurance services in the country. From the Association of Kenya Insurers (AKI), Association of Insurance Brokers in Kenya (AIBK), Insurance Regulatory Authority (IRA), insurance underwriters and experts in insurance are embracing a new strategy that is aimed at ensuring the industry commands the respect it deserves and that more customers are taking up the services and are also becoming critical champions to drive insurance growth so as to counter the erstwhile, limiting perceptions that insurers are out to fleece the public with little or no likelihood of making a return from the lucrative covers offered.

In consultation with the regulator, agents' body and member associations, the insurance firms are developing new products that are not only friendly to consumers but which pioneers service delivery in an under-exploited market category

1.2 Statement of the problem

An agriculture production and farm income in Kenya is frequently affected by natural disasters such as droughts, floods, hailstorms, excessive rainfall, frost, lightening and landslides. Susceptibility of agriculture to these disasters is compounded by the outbreak of epidemics and man-made disasters such as fire, sale of spurious seeds, fertilizers and pesticides, price crashes etc. All these events severely affect farmers through loss in production and farm income, and they are beyond the control of the farmers. With the growing commercialization of agriculture, the magnitude of loss due to unfavorable eventualities is increasing.

Mechanisms like contract farming and futures trading have been established which are expected to provide some insurance against price fluctuations directly or indirectly. But, agricultural insurance is considered an important mechanism to effectively address the risk to output and income resulting from various natural and manmade events. Despite technological and economic advancements, the condition of farmers continues to be unstable due to natural calamities and price fluctuations. In some extreme cases, these unfavorable events become one of the factors leading to farmer's suicides which are now assuming serious proportions (Raju and Chand, 2007).

Various studies have been carried out on agriculture insurance (Keith et al, 2005, Raju and Chand, 2007, World Bank 2007 and Gift, 2009) but there is no study that has been done to bring out the challenges facing the performance of agriculture insurance in Kenya. Keith et al, 2005, did a study on private crop insurers and the reinsurance fund allocation decision which although has an impact on the Kenyan case, it still doesn't address the issue of the challenges facing the performance of agriculture insurance. Raju and Chand, 2007 did a study on the progress and problems in agricultural insurance in India, which is a different context with Kenya. World Bank, 2007 did a study on promoting access to agricultural insurance for small farmer but the study didn't particularly deal with the Kenyan case. Gift, 2009 brought out the main agriculture insurance options but didn't bring out the issue of challenges really affecting agriculture insurance in Kenya.

It is against this backdrop that this study investigated the performance of agriculture insurance in Kenya. The study was to investigate the challenges facing the performance of agriculture insurance in Kenya.

1.3 Research Objective

To determine the challenges facing the performance of agriculture insurance in Kenya.

1.4 Significance of the Study

This study will help in formulating favourable strategies that will result in increased adoption of insurance policies therefore protecting the numerous, vulnerable, small and marginal farmers from hardship, bringing in stability in the farm incomes and increase in farms production.

This study is useful as follows;

To insurance companies, the study will be useful since it will help them in the understanding of the challenges facing the performance agriculture insurance therefore assisting them in proper underwriting of agriculture risks and also in coming up with measures to assist them in venturing into this untapped market.

To farmers, the coming up with useful agricultural insurance products will enable farmers stabilize their farm income and investment and guard them against disastrous effect of losses due to natural hazards or low market prices.

To government, it will be relieved from the occasional events of food aid since farmers will be self reliant and concentrate on other matters of national development.

To academia, the study will enrich the knowledge of agriculture insurance in Kenya relative to what is there currently.

CHAPTER TWO: LITERATURE REVIEW

2.1 Agriculture Insurance Overview

Risk is an unavoidable but manageable element in the business of agricultural production and marketing. Agricultural production can vary widely from year to year due to unforeseen weather, disease and pest infestations, and/or market conditions causing wide swings in yields and commodity prices. In order to mitigate the inherent risks common to agriculture, farm operators have to use an array of risk management strategies and techniques such as crop diversification, maintaining financial reserves, reliance on off-farm employment and income generation, production contracting, marketing contracting, forward pricing, futures options contracts, leasing inputs and custom hiring and acquiring crop and revenue insurance.

Agriculture insurance is a globally recognized means to assist the agriculture industry because it can target assistance to those in need, react quickly to production disasters, provide access to credit for operating and modernization of the industry and is a platform on which risk exposures can be distributed internationally. When designed properly and it complies with international trade agreements, agriculture insurance can be an effective tool to encourage best farming practices in the local agriculture sector. Tools for risk management in agriculture are distinguished in strategies concerning on-farm measures (diversification of the production programmes) or risk sharing strategies like marketing contracts, production contracts, hedging on futures markets, or the participation in mutual funds and insurances.(EU,2006)

Providing insurance tailored for the rural market and covering perils that do not have problems with risk independence, exposure or tariffs/ premium are worth considering (Jain, 2004). A broad range of innovative insurance schemes may be permitted to operate at a time, so as to charge competitive/reasonable price for buying the insurance and cater to the specific need of the farming community. It has to be admitted that penetration of insurance in most developing countries is low.

Farmers have a wide array of instruments for managing income risk. Futures and options contracts, forward contracts, and other derivative pricing instruments have been available for many years. Multiple-peril crop insurance, which triggers payoffs based on individual-farm yield shortfalls, has long been an option to manage yield risk. More recently, area-yield insurance which triggers payoffs based on yield shortfalls has been made available to many farmers. The latest innovation in risk management is direct protection against revenue shortfalls through revenue insurance. Revenue insurance is currently being offered under a variety of designs including individual farm revenue insurance and area revenue insurance, and alternative methods for valuing yield or revenue shortfalls.

Smallholder agriculture in Africa has consistently under-performed, for reasons that remain only partly understood, despite a succession of theoretical paradigms and analytical frameworks that have been translated into policy prescriptions which have similarly failed to deliver sustained and significant increases in agricultural yields, (Olubiyo, 2009). Determinants of the level of premium rates in crop insurance include the frequency of risks in time and on area, the type of risk and the number of risks covered, the sensitiveness of crops to be covered, the number of farms to be insured and the technicalities like deductibles.

2.2 Key Challenges Facing the Performance of Agricultural Insurance

2.2.1 Systemic Risks

Systematic risk is a risk that affects a large number of economic units. Most agricultural losses mainly affect a large number of farmers in the same geographical area. The systemic nature of agricultural risks can generate major losses in the portfolio of agricultural insurers. This pose a challenge to the local insurers since major risks can seriously affect the financial solvency of the insurance companies.

Many of the crop-yield risks faced by farmers come from the randomness induced by weather and natural growing conditions. Because such risks are typically realized over a large geographic area, catastrophic risks may be significant and difficult for insurers to diversify. Likewise, widespread animal epidemic diseases can simultaneously affect a large number of herders, generating major losses.

Government intervention is necessary to assist the insurers since no private reinsurer or pool of reinsurers has the capacity to cover such a large liability when the risks, even though small, may be difficult to diversify. The government is able to provide the capital necessary to finance such systemic risks. Government intervention may boost the overall welfare of society by facilitating the purchase of some specific-peril insurance plans that address the risks associated with infectious or communicable hazards (Bekkerman, Goodwin, and Piggott 2008).

2.2.2 Adverse Selection and Moral Hazard

The two critical informational problems that any insurance program faces are adverse selection and moral hazard. Both are intimately tied to the difficulties associated with measuring risks and monitoring farmer behavior. It may be very difficult for private entities to measure risks, collect relevant data, monitor producer behavior, and establish and enforce underwriting guidelines. These difficulties result in high, possibly prohibitive, transactions costs that preclude the development of private insurance markets.

Ramaswami (1993) grouped insurance effects in two: moral hazard effects and risk reduction effects. The first encourages reductions of input use and by the second the insured would seek greater expected revenue. However, there is some ambiguity with regards to moral hazard effects, because increase-production inputs can be also risk-augmenting. In general, it is thought that fertilizers are risk-augment inputs, and pesticides risk-reduction inputs. However, insurance policies include a number of provision and features that are meant to reduce or eliminate moral hazard, but adding little room for risk reduction effects.

Adverse selection arises because of a lack of information, which in turn results in inaccurate premium rates that make high-risk individuals more likely to purchase insurance. Adverse selection can lead any insurance plan to be unprofitable and eventually fail. Avoiding adverse selection may require crop insurance programs to identify, acquire, and use data that discriminate among risks. Identifying homogeneous risk groups is a prerequisite for a successful contract. The government may have a comparative advantage in providing additional information to help insurers discriminate their risks and price them accordingly. Policymakers may perceive such price differentiation as socially unacceptable.

Moral hazard occurs when insured agents alter their production practices in some way that changes their underlying risk and is not easily observable by insurers. In the case of agricultural insurance, this typically involves a failure to use good farming practices, to care for the crop, or to provide adequate fertilizer or water. Moral hazard is particularly acute under MPCCI programs, where insurers may have difficulties distinguishing between losses caused by an adverse natural event and losses caused by bad management. This problem is particularly acute for crop pests and diseases. Traditional named-peril insurance, such as hail insurance, is much less exposed to moral hazard, because it is unpredictable and unavoidable and because the cause of loss can be more easily identified.

Farmers purchase insurance policies because they expect the benefits are positive and they can gain from asymmetric information, and they are risk-averse (Just et al. 2003). With insurance, asymmetric information implies that the insured and insurer have different information about productive risks and insured behaviour. Asymmetric information is thought to provide incentives for moral hazard and adverse selection. Quiggin et al. (1993) contend that very often it is not possible to empirically distinguish between moral hazard and adverse selection however different may be in theoretical terms.

Wright and Hewitt (1990) and Moschini and Hennessy (2001) contend that actual demand for insurance would be lower than is generally believed, because farmers have many other cheaper means to control and reduce their risks. In general, insurance is thought to be expensive instruments, because policies have to be designed in order to reduce the negative effects of asymmetric information. As a result, in the absence of subsidies, insurance would not be attractive to most farmers.

Hazell (1992) and Skurai and Reardon (1997) identify strong potential demand for insurance in Sub-Saharan African countries, but their analysis raises concerns that moral hazard arising from post disaster food aid may undermine the viability of such contracts.

The Kenya government has a major role to play in the reduction of informational asymmetry. The development and maintenance of agricultural and weather databases, as public goods, can

help insurers properly design and price agricultural insurance contracts, thus reducing adverse selection. Public extension services that assist and supervise farmers in the management of their production risks before and after the occurrence of a loss can help reduce moral hazard.

2.2.3 Emergency Aids

Governments tend to alleviate the effects of crop failures or other disasters by providing post disaster direct compensation as a relief measure. This poses a “Samaritan’s dilemma” (Coate 1995), whereby post disaster aid discourages programs that provide more efficient financial solutions and reduce the magnitude of losses from future events. Disaster payments are generally not an established set of programs (hence their ad hoc nature); they are usually emergency responses to specific loss events through the Ministry of Special Programs. A very wide range of disaster payment programs exist; in some cases, their frequency and magnitude suggest that they serve as a form of insurance. Because disaster payments serve the same general purpose as insurance providing compensation to indemnify losses the existence of disaster payments may reduce farmer participation in crop insurance programs. Subtle issues relate to how these programs may bring about distortions that affect the performance of coincidental insurance programs. The government can channel the funds that are set aside for special programs in providing insurance for all by giving subsidies or support the insurance companies in case there is a massive loss.

2.2.4 Limited Access to International Reinsurance Markets

Access to the international reinsurance market is limited in Kenya, particularly for specialized lines of business, such as agricultural insurance. Many insurance companies in developing countries identify limited access to international re-insurers as one of the main constraints to the development of agricultural insurance, (Oliver & Stutley, 2008). However, agricultural reinsurers and brokers have shown an increasing interest in developing their business in low and middle income countries. Smaller countries with narrower business opportunities may have more difficulty attracting these international companies. Reinsurers report that reinsurance capacity is available for crop and livestock programs that are properly designed and have rates that generate enough premium volume to cover the expected losses, operating costs, and costs of capital (including profits).

International reinsurance markets provide not only reinsurance capacity but also technical expertise. It is in the interest of reinsurers that an agricultural insurance program be properly designed and adequately priced, using international standards for underwriting, pricing, and loss adjustment. The government can approach the international re-insurers that have capacity for agriculture insurance and link them with the local insurance companies that are willing to offer agriculture insurance to farmers.

2.2.5 Poor Agricultural Risk Infrastructure

An important supply-side impediment to the provision of agricultural insurance in developing countries is the lack of infrastructure support, (Oliver & Stutley, 2008). Agricultural insurance is highly data intensive. Individual grower yield based crop insurance and indemnity products require individual farm-level yield data, which are costly to collect even in developed countries. Index based insurance is also data intensive. However, the data are collected for policy not insurance purposes; for this reason, they do not usually include the cause of loss, which is important information for insurers. Likewise, weather-based crop insurance relies intensively on weather data and is dependent on the density of the weather station network and the quality and accuracy of the data collected.

The poor quality of data can also be an important impediment to the development of agricultural insurance. The data collection process should be transparent, subject to a strict protocol, and handled by a disinterested third party. Rainfall data have been collected for decades using manual rainfall gauges, which expose the data to erroneous reporting. Crop-yield surveys are not always conducted as they should be, usually because of lack of financial and human resources in statistical departments.

Lack of historical data can prevent the proper modeling of the underlying risk, particularly the tail of the distribution, leading to the incorrect pricing of Agricultural insurance products. Agricultural risk assessment is complex, particularly regarding the impact of extreme natural events on crop and livestock losses. Catastrophe risk simulation techniques are powerful tools for assessing risk exposure at both the micro and macro levels. Such tools were initially developed to assess the catastrophic losses on the portfolio of property insurers. These tools are complex

and costly to develop, making them unaffordable for most individual insurers, particularly in developing countries.

The World Bank assisted the government of India in developing a probabilistic drought risk assessment model to assess the effects of different drought mitigation strategies and climate change scenarios. This model could also be used by agricultural insurers to assess the exposure of their insurance portfolio to drought (World Bank 2006). Kenya government can develop these models as public goods, providing domestic agricultural insurers with quantitative tools with which to better assess their agricultural risk exposure and design actuarially sound agricultural insurance products.

Insurance companies in developing countries usually have very limited experience in agricultural insurance. The complexity of this line of business requires highly specialized skills. Start-up costs can be too high for private insurance companies to afford. In addition, innovations in insurance products developed by a leading company can be easily copied, making any return on such investments highly uncertain. Governments, with the assistance of the donor community, could provide technical assistance, possibly combined with some form of subsidies on start-up costs, to help insurers develop innovative and cost-effective agricultural insurance products. Government has a role to play in offering public goods such as agricultural and weather databases and crop risk models.

2.2.6 Low Risk Awareness

Farmers tend to be keenly aware of their production risks. In contrast, they tend to underestimate the likelihood or severity of catastrophic events. The U.S. Congress reported that insured producers tend to purchase too much insurance for relatively common events and too little insurance for low-probability events that are beyond their financial capacity (Wright and Hewitt 1994). This tendency to underestimate catastrophic events may make farmers and herders unwilling to purchase agricultural insurance, particularly against extreme losses. The government, in close collaboration with the insurance industry, could develop risk awareness campaigns to sensitize farmers and herders about their exposure to catastrophic events.

2.2.7 Lack of Insurance Culture

A commonly cited reason for the low demand for agricultural insurance in developing countries is the limited understanding of its benefits (Oliver & Stutley, 2008). Insurance is often perceived as a nonviable investment because premiums are collected every year but indemnities are paid much less frequently. Many rural households in developing nations are not financially literate, and insurance is an unfamiliar concept to many potential policyholders. As a result, the few insurance products that are currently available in low- and middle-income markets are not well understood by potential buyers. Policy exclusions and coverage limitations are often a source of confusion. Thus, potential buyers, even educated ones, sometimes prefer to retain risk than trust a third party like an insurance company.

In partnership with insurance companies and other policyholders involved in agricultural risk management programs, the government can play a central role in promoting education campaigns and training for farmers on the role of agricultural insurance. Such activities would raise financial literacy among the rural community.

2.2.8 Lack of Affordability

Although the limited ability to pay cannot be considered, strictly speaking, a market imperfection contributes to the lack of demand for insurance and can be an equity rationale for public intervention. In most developing countries, low incomes inhibit the development of insurance markets, (World Bank 2007). Incomes for the vast majority of the population are absorbed by basic necessities, such as food and housing. Where insurance is available, health insurance and life insurance are usually given higher priority over agricultural insurance. A recent analysis indicates that there is very limited provision of insurance in the world's poorest countries, although there is some reason to believe that micro-insurance penetration will increase in the future, particularly for life and health insurance (Roth, McCord, and Liber 2007).

In many cases, rural households involved in agricultural activities do not generate enough profits to cover the costs of agricultural insurance. The government may want to provide premium subsidies as part of a social safety net program, targeting, for example, small and marginal

farmers. These subsidies could be designed to provide farmers with financial incentives to engage in agricultural risk reduction activities.

2.2.9 Lack of Agriculture Insurance Regulatory Framework

The regulatory frameworks governing insurance markets in many low and middle income countries tend to be underdeveloped. As a result, short-term market incentives and regulatory constraints can in some cases inhibit increased penetration of insurance, including agricultural insurance. In Kenya, agricultural insurance is treated as part of non-life insurance business and therefore subject to the same regulatory requirements as other non-life policies and is rarely mentioned in insurance law.

Innovative agricultural insurance products, such as index-based crop insurance or parametric (weather-based) crop insurance, require an enabling regulatory framework. This new type of insurance, in which indemnity payments are based on an index (such as average yield in a given geographical area or rainfall levels) rather than actual individual losses, can challenge the basic requirements of insurable interest. Business interruption insurance covers firms experiencing insurable revenue losses that may not be associated with the loss of a physical asset. Formulating weather-based insurance as a special class of business interruption, which protects against losses and extra costs as a result of an insured event, may facilitate the regulation and supervision of weather-based insurance.

Another regulatory principle is that the insurance product indemnifies insured losses. This requirement aims at distinguishing insurance from other hedging instruments. A strict interpretation of this principle may exclude index-based products as an insurance product, because an index is used as a proxy for losses, which is by definition imperfectly correlated with the individual losses.

The government can play an important role in promoting an enabling legal and regulatory framework. This framework should allow for the development of both traditional indemnity-based and innovative agricultural insurance products, such as index-based insurance; crowd in insurance and reinsurance companies; and protect farmers against potential insurers' malpractice like non-payment of valid claims.

CHAPTER THREE: RESEARCH METHODOLOGY

3.1 Research Design

The study was carried out using descriptive cross-sectional design as well as co-relational research. It was a descriptive cross sectional survey because data was gathered from insurance companies dealing with general insurance on the factors facing the performance of agriculture insurance. It was also a co-relational research because it was concerned with assessing the relationship among the factors affecting the performance of agriculture insurance in Kenya.

3.2 Study Population

The study targeted insurance companies dealing with general insurance since they are the one that handle agriculture insurance. There were 40 registered insurance companies but only 34 dealt with general insurance. All the 34 insurance companies were studied hence the study was a census study.

3.3 Data Collection

Qualitative data was collected using questionnaires focusing on the challenges facing the performance of agriculture insurance. The primary data was collected using questionnaires from underwriting managers of the sampled insurance companies. Since most of them were busy, some questionnaires were hand delivered to the insurance companies in self addressed envelopes and later picked after they were filled. Some were emailed to the specific managers in the different companies to the convenient of the respondents.

3.4 Data Analysis

Once the questionnaires were collected, they were checked for completeness and then coded and entered into the Statistical Package for Social Sciences (SPSS).

Descriptive statistics was used considering the qualitative nature of the data collected using questionnaires. This offered a systematic and qualitative description of the objectives of the study.

CHAPTER FOUR: DATA ANALYSIS, RESULTS AND DISCUSSION

4.1 Introduction

This chapter discusses the results from the study. It's very useful since it shows a reflection of what is happening in the real sense. Data from the field was checked for completeness, then coded and entered into the Statistical Package for Social Sciences (SPSS). The results from SPSS were then described using tables to show how the factors being studied relate to the objectives of the study.

A total of 34 questionnaires were distributed and 25 were returned making a response rate of 74%. This was considered to be good since the industry under study is very restrictive on giving out information to the public and most of them do not underwrite agriculture risks. The first section of the questionnaire aimed at collecting the respondent's personal information and the organization they work for. Most of the respondents choose not to give the name of their company probably for security reasons.

4.2 Results

4.2.1 Risks Affecting Agricultural Production

The respondents were asked to indicate the main risks that affect farmers and the extent into which the risks affect the farmers. The results are as indicated here below;

Table 4.1 Risks Affecting Agricultural Production

Risk	Average	Extent
Theft	2.30	12.00%
Lightening	2.09	11.00%
Uncontrollable Pests & Diseases	2.83	15.00%
Frost	2.00	10.50%
Hail	2.00	10.50%
Fire	1.87	9.80%
Drought	3.26	17.20%
Excessive Rainfall	2.65	14.00%
	Total	100.00%

From the results in table 4.1, drought is the major risk, followed by uncontrollable pests and diseases then excessive rainfall, theft, lightening, frost, hail and then fire.

4.2.2: Geographical extents in which agriculture risks affect farmers

The respondents were asked to indicate whether the agriculture risks affect a large number of farmers in the same geographical area. Very large area are farms within a radius of over 100 acres, large areas between 50 and 100 acres while medium area is below 50 acres. The results are as follows;

Table 4.2: Geographical extents in which agriculture risks affect farmers

Geographical Area	Frequency	Percent
Very Large Area	8	32.0
Large Area	11	44.0
Medium Area	6	24.0
Total	25	100.0

From the results in table 4.2 above, agriculture risks affect a large area. This means that most farmers in the same geographical areas are affected by agriculture risks and therefore they need something to hedge them against these risks through insurance if farming is going to be sustainable.

4.2.3 Extents to which Agriculture Risks are induced by Weather and Natural Growing Conditions

The respondents were asked to indicate the extent to which agriculture risks are induced by weather and natural growing conditions. High extent is where the risks are induced by more than 50% of the weather and natural growing conditions. High extent is where the level of inducement is between 25% and 50% while medium extent is where the level of inducement is less that 25%. The results are as follows;

Table 4.3 Extents to which Agriculture Risks are induced by Weather and Natural Growing Conditions

Extent	Frequency	Percent
Very High	7	28.0
High	16	64.0
Medium	2	08.0
Total	25	100.0

From the results, agriculture risks are mainly induced by weather and natural growing conditions and therefore beyond the control of farmers. Therefore, there is need for farmers to transfer the risks to insurance companies for peace of mind.

4.2.4: Effectiveness of Local Insurance Companies in Managing Agricultural Risks

The respondents were asked whether the local insurance companies have been effective in assisting farmers in managing agriculture risks. 68% of the respondents indicated that local insurance companies have not been effective in managing agriculture insurance risks in Kenya.

4.2.5 Possibility of Collecting Relevant Data to Measure Agriculture Risks and Monitor Farmers Behavior

The respondents were asked to indicate how possible it is to collect relevant data, measure agriculture risks and monitor farmer’s behaviour.

Table 4.4: Possibility of Collecting Relevant Data to Measure Agriculture Risks and Monitor Farmers Behavior

Possibility	Frequency	Percent
Very Possible	7	28.0
Possible	17	68.0
Impossible	1	4.0
Total	25	100.0

From the results, it’s possible to collect relevant data, measure agriculture risks and monitor farmer’s behaviour. Therefore, if adequate agriculture infrastructures are put in place, it will be possible to come up with actuarial sound agriculture insurance products that will be beneficial to both the farmers and all other stakeholders.

4.2.6: Simplicity of Grouping Agriculture Risks based on Geographical Regions and Type of Crops/Animals

The respondents were asked to indicate how simple it is to group agriculture risks based on geographical regions and type of crops/animals. The results are as follows;

Table 4.5: Simplicity of Grouping Agriculture Risks based on Geographical Regions and Type of Crops/Animals

Simplicity	Frequency	Percent
Very Simple	4	16.0
Simple	14	56.0
Not Simple	7	28.0
Total	25	100.0

From the results in table 4.5, its simple to group agriculture risks based on geographical regions and types of crops/animals. This is beneficial since it will be easy to group agriculture risks into homogenous categories making it easy to price and manage agriculture insurance.

4.2.7: Extent to which lack of information, moral hazard and asymmetric information affect the Performance of Agriculture Insurance

The respondents were asked to indicate the extent to which lack of information, moral hazard and asymmetric information affect agriculture insurance. Very high extent is where the level of effect falls between 75% to 100%, High extent between 50% and 75%, Medium extent between 25% and 50%, Low extent between 10% to 25% while Low extent is below 10%. The results are as follows;

Table 4.6: Extent to which lack of information, moral hazard and asymmetric information affect the Performance of Agriculture Insurance

Factor	Very High Extent (n(%))	High Extent (n(%))	Moderate Extent (n(%))	Low Extent (n(%))	Very Low Extent(n(%))
1. Lack of Information	8(32%)	17(68%)	0(0)	0(0)	0(0)
2. Moral Hazard	5(20%)	11(44%)	9(36%)	0(0)	0(0)
3. Asymmetric Information	7(28%)	9(36%)	9(36%)	0(0)	0(0)

From the results in table 4.6, lack of information affect the performance of agriculture insurance to a high extent, Moral hazard to a moderate extent while asymmetric information had a tie between high and moderate extent. These factors are some of the main challenges facing agriculture insurance and understanding the extent to which they affect this class of insurance is useful in coming up with measures necessary to reduce the negative extents.

4.2.8: Compensation by government inform of food aid to farmers in case of a Crop Failure and the extent of compensation

The respondents were asked to indicate whether or not the government compensated them in case of a crop failure in terms of emergency food aid. The results indicated that 80% of the farmers are not compensated in case of a crop failure while 20% are compensated in terms of emergency food aid.

The respondents were also requested to indicate the extent to which the government compensated farmers compared to their actual loss if it in fact compensate farmers. The results are as follows;

Table 4.7 Compensation by government inform of food aid to farmers in case of a Crop Failure and the extent of compensation

Extent	Frequency	Percent
< 25%	7	58.0
Up to 50%	4	34.0
Above 50%	1	8.0
Total	12	100.0

From the results in table 4.7, farmers are compensated to an extent of less that 25% of their actual loss and therefore there is need to have other measures that can really compensate farmers to a bigger extent instead of waiting for the government to compensate them inform of food aid in case there is a crop failure.

4.2.9: Risk Capacities that Local Insurance Companies have in Underwriting Agriculture Insurance

The respondents were asked to indicate the risk capacities that the local insurance companies have in underwriting agriculture risks and the results were as follows;

Table 4.8: Risk Capacities that Local Insurance Companies have in Underwriting Agriculture Insurance

Capacity	Frequency	Percent
High Capacity	3	13.0
Medium Capacity	13	56.5
Low Capacity	7	30.5
Total	23	100.0

From the results in table 4.8, local insurance companies have medium capacity to underwrite agriculture risks and therefore they are not able to underwrite big agriculture risks.

The respondents were also requested to indicate whether or not it's easy to access international reinsurance markets for additional capacities to underwrite agriculture insurance. 68% of the respondents indicated that it's easy to access international reinsurance markets.

4.2.9: Technical Expertise of Local Insurance Company

The respondents were asked to indicate whether the local insurance companies have the technical expertise to underwrite agriculture insurance. 56% of the respondents indicated that they don't have the technical expertise while the rest indicated that they have the technical expertise.

The level of competence was also asked for those who indicated that local underwriters have the technical expertise to underwrite agriculture insurance and the results are as follows;

Table 4.9: Technical Expertise of Local Insurance Company

Level of competence	Frequency	Percent
Very Competent	1	4.0
Competent	7	28.0
Incompetent	4	16.0
	25	100.0

From the results in table 4.9, the local underwriters who have the technical expertise to underwrite agriculture insurance have adequate level of competence.

4.2.10 Extent to which the respondents were agreeable to four named factors

Respondents were asked to indicate the extent to which they were agreeable to the four named factors in relation to agriculture insurance and the results are as follows;

Table 4.10 Extent to which the respondents were agreeable to the four named factors

Factor	Strongly Agree (n(%))	Agree (n(%))	Disagree (n(%))	Strongly Disagree (n(%))
1. There is sufficient historical data for proper modeling of Agriculture insurance products	4(23.5%)	9(52.9%)	4(23.5%)	0(0)
2. There are efficient tools for accessing risk exposure at both micro and macro levels of agriculture	2(8.7%)	12(52.2%)	3(39.1%)	0(0)
3. It is affordable for insurance companies to service agriculture insurance	5(22.7%)	8(36.4%)	8(36.4%)	1(4.5%)
4. There are enough regulatory frameworks to govern agriculture insurance	2(8%)	13(52%)	8(32%)	0(0)

From the results in table 5.0, there is sufficient historical data for proper modeling of the underlying risks leading to proper pricing of agriculture insurance products. There are also sufficient tools for assessing risk exposure at both micro and macro levels of agriculture.

From the results also, there was a tie between those who agreed and those who disagreed that it's affordable for local insurance companies to service agriculture insurance. The results also show that there are enough regulatory frameworks to govern agriculture insurance in Kenya.

4.2.11 Levels of Farmers Awareness about the Benefits of Undertaking Agriculture Insurance

The respondents were asked to indicate that level of farmer's awareness about the benefits of undertaking agriculture insurance and the results are as follows;

Table 4.11 Levels of Farmers Awareness about the Benefits of Undertaking Agriculture Insurance

Level of Awareness	Frequency	Percent
Moderate level	7	28.0
Low Level	18	72.0

From the results, it shows that that the level of farmer’s awareness about agriculture insurance is low and therefore farmers need to be sensitized on the advantages of undertaking agriculture insurance. This can be done in consultation with all the stakeholders in this area of agriculture. 75% of the respondents also indicated that agriculture insurance is expensive.

4.3 Discussion

The results obtained are useful in determining the objectives of the study. From the results, the challenges facing the performance of agriculture insurance comes out clearly and therefore shows the areas that need intervention in order to improve the performance of agriculture insurance.

4.3.1 Challenges facing Agriculture Insurance

Many agriculture risks affecting farmers are induced by weather and other natural growing conditions and therefore beyond the control of farmers. These risks affect farmers in large geographical area and therefore are therefore systemic. Farmers therefore need insurance to transfer these risks to avoid the adverse effects of crop failure as a result of the agriculture risks. However, local insurance companies have not been effective in managing agriculture insurance on behalf of farmers.

For any risk to be successfully underwritten, it requires to be clearly understood and its trend of occurrence properly analyzed. However, for agriculture risks no much emphasis has been placed to understand them and also their occurrence has not been properly analyzed as per the study results. This is due to poor agricultural risk infrastructure therefore limiting the type of data that is collected, lack of historical data and lack of risk simulation techniques necessary to assess risk exposure at both the micro and macro levels.

Identifying homogeneous risk groups is a pre-requisite for a successful contract. From the study, it shows that it's simple to group agriculture risks into homogeneous risk groups but not much has been done to group them. Lack of information on the case of agriculture insurers has led to adverse selection whereby risky farmers are charged the same premium as those who are less risky resulting to poor performance of this class of insurance. Moral hazard whereby farmers interfere with the insured risk in order to be paid by the insurance companies is also very high and has led to poor performance of this class of insurance too.

Asymmetric information whereby the insurer and insured has different understanding of the insurance product is also high and also has a high effect on the performance of agriculture insurance. Only a small percentage of farmers are compensated in terms of emergency food aid in case of a crop failure. For the few that are compensated, they are offered less than 25% of the actual loss that they have suffered as a result of the crop failure. Local insurance companies have medium capacity to underwrite agriculture insurance and accessibility of international reinsurance markets for additional capacities is not easy.

On the issue of the technical expertise to underwrite agriculture insurance, very few local insurance companies have competent technical expertise. The results also show that there are enough regulatory frameworks to govern agriculture insurance in Kenya but they have not been followed properly since this class of insurance has been neglected by the regulatory bodies since it's new in the industry.

The level of awareness on the benefits of undertaking agriculture insurance is low and farmers need to be sensitized on the advantages of undertaking agriculture insurance. Agriculture insurance is expensive to farmers and therefore measures should be undertaken to make it affordable. Local insurance companies lack adequate capacity to underwrite agriculture insurance and accessing additional capacity from the international reinsurance companies is not easy.

CHAPTER FIVE: SUMMARY, CONCLUSION AND RECOMMENDATION

5.1 Summary

From the study, it shows that agriculture insurance in Kenya is not performing well and therefore there is need to have some interventions that will increase the performance of this class of insurance. This calls for all stakeholders starting with the government, insurance companies, farmers and others to work together toward the prosperity of agriculture insurance. The benefits of undertaking agriculture insurance are enormous and therefore all necessary measure should be put in place to ensure its success.

From the study, a number of challenges have been identified and there is need to intervene in terms of having good policies that will ensure good performance of agriculture insurance. The challenges unless they are addressed, they will continue to hinder the growth of this class of insurance. In return, the benefits of having agriculture insurance in a country will no longer be there and therefore may affect negatively all the stakeholders involved. The study conclusions and recommendations are as indicated here below.

5.2 Conclusion

Agriculture remains an important economic sector and a primary source of livelihood in Kenya. A comprehensive agricultural risk management approach, including physical risk mitigation and financial risk management can contribute to the modernization of the sector. Access to financial services including agricultural insurance and other risk financing instruments, such as savings or (contingent) credit can help farmers and herders engage in more productive farming practices and ensure that they can start a new production cycle after a natural disaster.

Agriculture insurance in Kenya has not really performed well since it was introduced. This call for interventions in the agriculture sector which include promotion of agriculture extension services, the timely availability of inputs, and efficient marketing channels for agricultural outputs. From the study, it shows that there are challenges facing agriculture insurance and interventions are necessary to ensure increased uptake of agriculture insurance and improved performance.

The challenges identified from the study include having systematic risks that affect a large number of farmers within the same geographical area. In case of a crop failure, the losses involved are huge and may be detrimental to the farmers and the insurance companies as well. Therefore, there is need to have clear measures to ensure that agriculture risks are well managed and also the insurance companies adequate risk capacities to underwrite agriculture risks.

The issue of adverse selection and moral hazard has also come out as a challenge when underwriting agriculture insurance. Adverse selection results in the underwriters accepting a high risk at a low premium therefore affecting the whole portfolio negatively since this result into losses. Moral hazard is where the farmers interfere with the risks or they don't manage the agriculture risks well resulting in losses. In return, adverse selection and moral hazard has really affected the insurance companies and there is need to have necessary measures to control these two.

Government aid in case of a crop failure is also a major challenge to agriculture insurance. Once the farmers are aware that the government will compensate them in case of a crop failure, they become reluctant and ignore agriculture insurance. Therefore the demand for agriculture insurance drops and since insurance is based on the law of large numbers, this class of insurance is affected since there is no big pool of premium from which to pay claims. In the end, the ratio between the premiums paid and claims paid becomes too big and this class of insurance becomes unmanageable.

Most local insurance companies don't have adequate risk capacities to underwrite agriculture risks considering that these risks are catastrophic. This is a challenge since the local insurance companies cannot underwrite big risks and therefore exposing the farmers and insurance companies in case they underwrite big risks. Sourcing for additional capacity from the international reinsurance markets has also come out as a challenge since it's not easy for the local insurance companies to access them.

For any risk to be properly underwritten, there is need to have good infrastructures to collect data and analyze them. Poor agriculture risk infrastructure in Kenya is an impediment to coming up with sound actuarial products that meets the need of the farmers and in return are profitable to the insurance companies. Therefore there is need to come up with a good risk infrastructure that will provide good data, analyze it and come up with good products. Currently, the products being used in Kenya are based on data collected in other countries and therefore may not work well in Kenya.

Low risk awareness and lack of insurance culture has also affected the performance of agriculture insurance negatively. This is because most farmers are not aware that the risks they face can be insured or transferred to another party. For those who are aware about agriculture insurance, they have not embraced it since they don't have a culture of undertaking insurance irrespective of the class. These two therefore results in low demand of agriculture insurance defeating the law of large numbers in insurance and therefore agriculture insurance becomes unsustainable.

Agriculture insurance is not affordable to the majority of farmers in Kenya. It's expensive and most farmers prefer to buy inputs and fertiliser instead of insurance. Therefore, it's necessary to develop agriculture insurance products that are affordable to the majority of Kenyan farmers. The regulatory frameworks should also be empowered to ensure that agriculture insurance prospers in Kenya.

5.3 Recommendation

Agriculture insurance has the potential to perform well if all the stakeholders work towards its success. Based on the findings of the study, there are various recommendations that need to be implemented in order to ensure success of this class of insurance.

5.3.1 Recommendations with policy implications

Foremost, the study found out that stakeholders in agriculture are not aware about agriculture insurance and its benefits. Farmers are not aware that they can transfer the risks that they cannot control especially those induced by weather and natural growing conditions to insurance companies. On the other hand, the government is not also aware of the benefits that can be accrued from having a good insurance scheme running in the country which in return will reduce food aid and ensure economic stability. Some insurance companies are not aware of the benefits that they can get from investing into this class of insurance. It's a new market segment that has not been exploited and the companies that will invest in it will eventually reap big in the long run. It's therefore recommended that there be improved awareness about the benefits of agriculture insurance to all the stakeholders. There should be improved extension services, public education, proper regulatory frameworks, financial assistance and increased agriculture risk infrastructure. Integrating agriculture insurance with financial services (credit), input supply (seeds and fertilizer), and intensive farmer education and training as well as a strong output marketing organization will lead to increased uptake of agriculture insurance. Livestock mortality insurance can be successful if complemented with livestock vaccination programs and intensive support and training in improved livestock husbandry and management, all of which reduce livestock mortality rates

Secondly, the study found out that agriculture insurance is not affordable to farmers. This is because there are no products tailor-made for the Kenya market and the ones available are highly priced. This is because of poor agricultural risk infrastructure, lack of agriculture regulatory frameworks, lack of government support, limited access to international reinsurance and developed markets, lack of agriculture insurance expertise, adverse and moral hazard by farmers. It's therefore recommended that measures be put place by all stakeholders to make agriculture insurance affordable. Necessary measures include having a well developed agriculture risk infrastructure courtesy of the government. There should be well maintained weather stations to determine the weather performance in the country and data should be well documented. Crop yield surveys should also be properly analysed and documented. Catastrophic risk simulation techniques which are powerful tools for assessing risk exposure are complex and costly to

develop thus making them unaffordable to most individual insurers therefore necessitating the government intervention in providing these tools.

Delivering insurance to the small and marginal farmers scattered all over the country is expensive for private insurance companies. Delivering cost can be reduced by bundling agricultural insurance with other financial services such as credit and delivering it through rural banks, microfinance institutions or input providers. Since the local insurance companies have very limited experience in agricultural insurance since its complex and requires highly specialized skilled, the government with the assistance of the donor community could provide technical assistance possibly combined with some form of subsidies on start up costs to help develop innovative and cost effective agricultural insurance products. Agricultural insurance products should be tailored to the targeted clients. Universal programs have proved to be inefficient and there is no “one size fits all” solution. Insurance policies should be designed to reflect the perils and types of farmers/herders to be protected.

5.3.2 Recommendations for further Research

Although this study has identified the challenges facing agriculture insurance in Kenya, a lot more research need to be undertaken to investigate why farmers and all Kenyans at large have not embraced insurance and what can be done to increase penetration of insurance in Kenya. It's therefore recommended that a study be done to identify how agriculture insurance works in the countries that it has been embraced and how insurance penetration in Kenya can be improved.

5.4 Limitation of the Study

The fact that agriculture insurance is a new product in the Kenyan insurance industry, many of the general insurance companies do not underwrite agriculture insurance. Therefore, obtaining information from the general companies that don't underwrite agriculture insurance was a problem. However, since the study dwelt more on insurance rather than agriculture itself, the questionnaires were structured in a way that even those who were not underwriting this class of insurance are able to respond.

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APPENDICES

Appendix 1: Research instrument on the challenges facing the performance of agriculture insurance in Kenya

Section A: Demographic Data

- 1.1. Name of the Respondent (Optional).....
- 1.2. Designation of the Respondent.....

Section B: Agriculture Insurance (Answer/Tick the appropriate answer)

2.1 To what extent do the following risks affect farmers;

2.1.1. Drought

Very high extent	High extent	Moderate extent	Low extent	Very low extent
1	2	3	4	5

2.1.2. Fire

Very high extent	High extent	Moderate extent	Low extent	Very low extent
1	2	3	4	5

2.1.3. Hail

Very high extent	High extent	Moderate extent	Low extent	Very low extent
1	2	3	4	5

2.1.4. Frost

Very high extent	High extent	Moderate extent	Low extent	Very low extent
1	2	3	4	5

2.1.5. Excessive Rainfall

Very high extent	High extent	Moderate extent	Low extent	Very low extent
1	2	3	4	5

2.1.6. Uncontrollable pests and diseases

Very high extent	High extent	Moderate extent	Low extent	Very low extent
1	2	3	4	5

2.1.6. Lightening

Very high extent	High extent	Moderate extent	Low extent	Very low extent
1	2	3	4	5

2.1.6. Theft

Very high extent	High extent	Moderate extent	Low extent	Very low extent
1	2	3	4	5

2.2 Does the risks mentioned in 2.1 above affect a large number of farmers in the same geographical area?

Very large Area	Large Area	Medium Area	Small Area	Very small Area
1	2	3	4	5

2.3 To what extent are the risks specified in 2.1 above induced by weather and natural growing conditions?

Very High	High	Medium	Low	Very Low
1	2	3	4	5

2.4 Have local insurance companies been effective in assisting farmers in managing agriculture risks?

Yes	1
No	2

3.0 How possible is it to collect relevant data, measure agriculture risks and monitor farmers' behaviour?

Very Possible	1
Possible	2
Impossible	3

3.1 Identifying homogeneous risk groups is a pre-requisite for a successful contract. How simple is it to group agriculture risks based on geographical regions and type of crops/ animals?

Very simple	1
Simple	2
Not simple	3

3.2 To what extent does the following affect the performance of agriculture insurance?

3.2.1 Lack of Information resulting to adverse selection

Very high extent	High extent	Moderate extent	Low extent	Very low extent
1	2	3	4	5

3.2.2 Alteration of production practices like bad farm management (Moral Hazard).

Very high extent	High extent	Moderate extent	Low extent	Very low extent
1	2	3	4	5

3.3 Do you believe that there is high asymmetric information (insurer and insured having different information about the productive risks and insured behavior) in agriculture insurance?

Very high	High	Medium	Low	Very Low
1	2	3	4	

4.0 Does the government compensate farmers in case of a crop failure?

Yes	1
No	2

4.1 If your answer to 4.0 above is yes, to what extent?

< 25%	1
Upto 50%	2
Above 75%	3

5.0 What risk capacities does the local insurance companies have in underwriting agriculture insurance?

High Capacity	1
Medium Capacity	2
Low capacity	3

5.1 Does the local insurance companies have easy access to international reinsurance markets on additional capacities to underwrite agriculture insurance?

Yes	1
No	2

6.0 Does local underwriters have the technical expertise to underwrite agriculture insurance?

Yes	1
No	2

6.1 If the answer to 6.0 above is yes, what is their level of competence?

Vey Competent	Competent	Incompetent	Not Applicable(N/A)
1	2	3	4

6.2 To what extent do you agree with the following statements?

6.2.1 There is sufficient historical data for proper modeling of the underlying risks leading to proper pricing of agriculture insurance products

Strongly agree	Agree	Disagree	Strongly disagree	Not applicable
1	2	3	4	5

6.2.2 There are efficient tools for assessing risk exposure at both micro and macro-levels of agriculture.

Strongly agree	Agree	Disagree	Strongly disagree	Not applicable
1	2	3	4	5

6.2.3 Its affordable for local insurance companies to service agriculture insurance.

Strongly agree	Agree	Disagree	Strongly disagree	Not applicable
1	2	3	4	5

6.2.4 There are enough regulatory frameworks to govern agriculture insurance in Kenya.

Strongly agree	Agree	Disagree	Strongly disagree	Not applicable
1	2	3	4	5

7.0 What is the level of farmer's awareness on the benefits of undertaking agriculture insurance?

High level	1
Medium level	2
Low level	3

7.1 How would you rate the affordability of agriculture insurance to farmers?

Highly affordable	Affordable	Expensive	Very expensive
1	2	3	4

8.0 What are the main factors affecting the performance of agriculture insurance in Kenya?

1.
2.
3.
4.

8.1 How can these factors affecting agriculture insurance be addressed?

1.
2.
3.
4.

9.0 Do you think agriculture insurance should be made compulsory?

Yes	1
No	2

Comment.....

9.0 Is agriculture insurance sustainable?

.....
.....

10.0 Any other comment;

.....
.....
.....

THANK YOU FOR YOUR TIME

Appendix 2: Licensed Insurance Companies (Year 2010)

- 1 APOLLO LIFE ASSURANCE LIMITED
- 2 OCCIDENTAL INSURANCE COMPANY LIMITED
- 3 KENYA REINSURANCE CORPORATION LIMITED
- 4 EAST AFRICA REINSURANCE COMPANY LIMITED
- 5 LION OF KENYA INSURANCE COMPANY LIMITED
- 6 GA INSURANCE LIMITED
- 7 INVESCO ASSURANCE COMPANY LIMITED
- 8 AFRICA MERCHANT ASSURANCE COMPANY LIMITED
- 9 UAP LIFE ASSURANCE LIMITED
- 10 FIDELITY SHIELD INSURANCE COMPANY LIMITED
- 11 MAYFAIR INSURANCE COMPANY LIMITED
- 12 MERCANTILE INSURANCE COMPANY LIMITED
- 13 PACIS INSURANCE COMPANY LIMITED
- 14 MADISON INSURANCE COMPANY KENYA LTD
- 15 UAP INSURANCE COMPANY LIMITED
- 16 KENYA ORIENT INSURANCE LIMITED
- 17 KENYA NATIONAL ASS. CO. (2001) LTD
- 18 THE CO-OPERATIVE INSURANCE CO. OF KENYA LTD
- 19 KENINDIA ASSURANCE COMPANY LIMITED
- 20 SHIELD ASSURANCE COMPANY LTD
- 21 OLD MUTUAL LIFE ASSURANCE CO. LIMITED
- 22 FIRST ASSURANCE COMPANY LIMITED
- 23 INSURANCE COMPANY OF E.A. LTD
- 24 CANNON ASSURANCE (KENYA) LTD
- 25 GEMINIA INSURANCE COMPANY LTD
- 26 TAUSI ASSURANCE COMPANY LIMITED
- 27 THE KENYAN ALLIANCE INSURANCE CO. LTD
- 28 PHOENIX OF E.A. ASSURANCE CO. LTD
- 29 TRINITY LIFE ASSURANCE COMPANY LTD
- 30 CHARTIS KENYA INSURANCE COMPANY LIMITED
- 31 BRITISH-AMERICAN INSURANCE CO. (K) LTD
- 32 PAN AFRICA LIFE ASSURANCE LIMITED
- 33 TRIDENT INSURANCE COMPANY LIMITED
- 34 THE JUBILEE INSURANCE COMPANY OF KENYA LIMITED
- 35 APA INSURANCE LIMITED
- 36 DIRECTLINE ASSURANCE COMPANY LIMITED
- 37 GATEWAY INSURANCE COMPANY LIMITED
- 38 PIONEER ASSURANCE COMPANY LIMITED
- 39 THE MONARCH INSURANCE COMPANY LIMITED
- 40 REAL INCURANCE COMPANY

Source:

Insurance Regulatory Authority (IRA) website: <http://www.ira.go.ke/Insurancecompanies.pdf>