



Challenges Facing Agricultural Sector in Accessing Credit from Financial Institutions

The Case Study of Horticulture Subsector in Tanzania

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ABSTRACT

Tanzania is currently experiencing a significant growth in population with potential food shortages predicted in the next few years. Global warming is causing a serious threat on food production because lands used for agriculture can no longer produce food. As a result of this, food prices are raising sharply causing an adverse effect in the economy where the standard of living is now very high. As a way to address this problem, the Government of Tanzania has prepared a “Kilimo Kwanza” initiative which aims at revolutionizing agriculture to increase food security in the country. Access to agriculture finance is one of the pillars of this initiative.

In this regard, the study examined challenges facing agriculture sector in accessing credit from financial institutions using horticulture subsector as a case. It examined factors that make agriculture financing risky and evaluated the gap that exists between farmers and financial institutions. Furthermore it evaluated strategies used by financial institutions to give credit to farmers and examined the impact of financing agriculture in Tanzania. This was a qualitative study which used a sample of 48 respondents from the two active horticultural production regions in Tanzania, Arusha and Kilimanjaro.

The study revealed that agriculture financing is an important catalyst in stimulating agricultural development to ensure food security in Tanzania. Unpredictable weather, lack of collateral, absence of agriculture insurance, little farmer’s education, infrastructure and fluctuating market prices are among factors which makes agriculture financing risky. It found that there is a big gap between small scale farmers and financial institutions mainly due to geographical distance between the two parties, availability of alternative sources of finance such as SACCOS, VICOBA and competition from mobile money services such as M-PESA. In assessing the impact of agriculture financing, the study revealed that there has been significant achievements in horticulture through support from the government and donors. The study therefore recommends that, the Government of Tanzania should invest more resources to ensure access to credit is not a challenge to farmers while financial institutions should develop products and services customized for agriculture giving priority to small scale farmers

Background of the Study

The agricultural sector in Tanzania employs approximately 80% of the population and the primary source of the labour force is comprised of 60% women while men form the remaining 20%. The sector average growth rate of 3.3% contributes around 24% of the GDP, 20% of foreign earnings and 32% of country's export (URT 2009). While arable land is estimated at 44 million hectares, only 10 million hectares or 23% are currently under cultivation and only 326,492 hectares are irrigated (Kaino and Mashindano 2012). Agricultural crops that are produced under this cultivated land include maize, sorghum, millet, rice, wheat, beans, cassava, potatoes, bananas and export crops including, coffee, cotton, cashew nut, tobacco, sisal, pyrethrum, tea, cloves, horticulture crops, oil seeds and spices (BOT 2011).

A report by consultant and trainers (2012:9) stipulated that, in Kenya, the agriculture sector contributes on average 24% of GDP directly and 27% indirectly. It provides about 70% of all informal jobs and 19% of informal jobs, 65% of all exports also accrue from this sector. This notwithstanding the sector only receives 5% of all 'bank credits' to private sector for the 12 months to February 2010. For the past 5 years bank credit to the sector has stagnated despite its rapid growth. Poor perceptions of the sector as being 'high risk' as well as challenges inherent in the various sub-sectors hinder flow of finance.

Business reasons which influenced a researcher to do a research on this area are;-high interest rate to farmers, non flexible repayment period, farmers not paying on time which can be due to seasonal changes, pests, diseases attacks, price fluctuation(inflation) and lack of market as contributing most to financial risks. The researcher was interested on this topic because of the Government of Tanzania efforts to promote agriculture development to achieve a green revolution vision in the country. The recently

unveiled "Kilimo Kwanza" declaration which puts agriculture on top of the Government agenda in the next 10 years is yet to address the challenge facing agricultural sector in accessing credit. Part of this declaration is the Southern Agricultural Growth Corridor of Tanzania (SAGCOT) initiative which has highlighted areas of priority to be financed with about 90% of this fund coming from donors. Moreover, the smallholder farmers, who are approximately 80% of the population (Tanzania Invest, 2012), cultivating 5.1 million hectares annually, did not receive a deserved attention in the initiative. Even the currently operating agriculture financing window established by the Government through the Tanzania Investment Bank (TIB) does not offer financial packages tailor-made for smallholder farmers making agriculture development a nightmare. Moreover the researcher wanted to expand her knowledge on how the financial institutions use collaterals to hedge themselves against risk of default from farmers who are the key horticultural producers.

Statement of the Problem

A study by Wolter, (2008) foreseen Tanzania as a major food-exporting country which is currently struggling to meet its own food requirements due to low productivity and the predominance of subsistence farming. (Wolter, 2008) emphasize on three important lessons that Tanzania can embrace to achieve the transformation of agriculture including; improving the general business environment for agriculture in particular, making food crop production profitable and improved access to finance. The current environment does not give farmers and agriculture SME's opportunities to grow through long term loans. Although the Government has made efforts to subsidize interest rate and creating an agricultural window through the Tanzania Investment Centre, yet small scale farmers cannot benefit from this initiative. Development partners and international financial institutions have injected money to banks and microfinance institutions but most

farmers do not qualify because of several reasons one being lack collateral as security to the loan. Even with these efforts, financial institutions are reluctant to extend loan to agriculture because of high risk involved and even those institutions which are willing have put high interest rates as a result of risk. This study therefore assessed challenges that agriculture sectors are facing in accessing credit and recommended the best practices that can be engaged to address these challenges for a true agricultural revolution in Tanzania.

Objectives of the Study

The general objective of this study was to examine challenges facing agricultural sector in accessing credit from financial institutions in Tanzania using horticulture subsector as a case.

Specific Objectives

Specifically, the study aspired at investigating the following

- a. To assess the factors that makes agriculture financing risky in Tanzania.
- b. To evaluate the gap that exists between farmers and financial institutions.
- c. To evaluate the strategies used by financial institutions to give out credits to farmers.
- d. To examine the impact of financing agriculture sector in Tanzania.

Justification of the Study

The study explored one of the most important agenda in ensuring food security and sovereignty in Tanzania, namely challenges facing agricultural sector in accessing credit from financial institutions. More specifically it examined the factors making agricultural financing risky, the gap that exists between farmers and financiers and examining the impact of financing agriculture sector in Tanzania. The study also examined different financing models along the agricultural value chain and measure their contribution towards ensure sustainable agricultural development in Tanzania.

The knowledge generated by this study addressed gaps which were not addressed by studies conducted by other researchers in the area of agriculture financing. In a study done by (Wolter 2008) the researcher revealed key challenges that impede the agricultural sector in Tanzania one of them being lack of access to finance. However, his study did not stipulate reasons behind this challenge. This paper therefore clarified in details the risks behind financing agriculture in Tanzania using horticulture as a case.

LITERATURE REVIEW

2.0 Theoretical Literature Review

Meaning of Credit

As defined by George and Ouma (2012), credit is an essential part in agricultural production systems which allow producers to satisfy the cash requirements induced by production rotation, which characterizes agriculture such as land preparation, planting, cultivation, and harvesting, which are normally done over a period of several months. As a result, cash income from production is received in a short time after the yield; nevertheless expenditures on purchased inputs must be completed during the production stage. Likewise Feder *et al.* (1990) found out that cash income is received within a short period after the harvest. Lack of credit market, farmers would have to retain cash reserves so as to assist production and consumption in the next round. Accessibility of credit allows both larger consumption and larger purchased input use, as a result increases wellbeing of the farmers.

Credit Risk Management in Financing Agriculture

According to Wenner (2010) explained that agriculture is an intrinsically risky economic activity. A great arrangement of unmanageable elements can have an effect on output production and prices follow-on highly variable economic returns to farm households. In emerging countries,

farmers lack access to both modern instruments of risk management such as agricultural insurance and futures contracts. Wenner (2010) continues to explain that formal lenders avoid financing agriculture sector for many reasons such as;-lack of collateral, high levels of rural poverty or low levels of farmer's education, high cost of service delivery, information asymmetries and financial literacy. However mostly bank managers around the world say that they will not finance agriculture sector because of the high degree of uncontrolled production and price risk that confronts the sector.

Financial Institutions

The Banking and Financial Institutions Act (2006), defines a financial institution as an entity engaged in the business of banking, but limited as to size, locations served, or permitted activities, as prescribed by the Bank or required by the terms and conditions of its license. Other authors defines a financial institution as an institution which collects funds from the public and places them in financial assets such as deposits, loans and bonds rather than tangible property (Investors Words, 2012). Financial institutions that are important for agriculture sector include commercial banks, microfinance institution (MFIs), non-bank financial institution example NSSF and informal moneylenders. Their most critical capacity gap particularly for microfinance and informal institution is inadequate financial organization skills. Moneylenders and some of the MFIs example, Savings and Credit Cooperative Societies (SACCOS), Savings and Credit Associations (SACAs) and Community Bank do not have a suitable authorized structure. Majority of the institutions particularly formal banks are town based and have limited networks for rural outreach and more significantly are not capable or unwilling to bear the risk of lending to the agricultural sector (URT 2001). The measures which have been undertaken by the government to improve the financial services to farmers are;-

Promoting Micro-Finance Institutions

There is a need to centralize formation of associations so as to provide short term monetary needs to the agriculture sector. This will employ facilitation of demand motivated, society based and lawful financial institutions with an element of facility building to guarantee good authority and precision. A means to assist and promote formal connection among MFIs and the formal financial organization will be evaluated. This connection banking will enable small holder crop and livestock farmers to access financial services indirectly from formal financial institutions. MFIs also have the potential to do something and support others on services such as saving mobilization, input supply and market information (URT 2001).

Establishing Institutional Arrangement for Investment Finance

Government has to support commercial bank either to launch Investment Banking Department inside their existing organization or create a new Agri-Investment Banking. These would finance investments in agriculture and agro-Industry including providing emerging medium and large scale farmers with investment capital for agricultural development. The government will initiate a mechanism for creating seed capital for such an investment service. The government will also explore the possibility of encouraging non-bank financial institutions to finance agricultural investments. (URT 2001:49).

Sources of Funds

Generally banks obtain their funds from customer deposits (individual, private firms, local and foreign government agencies) and retained earnings. The sources of the microfinance institutions (MFIs) are mostly from equity, internal savings, mobilization of reserves, subsidies and credit lines from commercial banks, the government and international organization.(Konare 2001:39)

Factors Affecting Loan Repayment.

There are more factors that have a consequence on settling loans such as insufficient credit follow-ups by the organization, lacking collateral confirmation, bad refund system, members' collapse to respect their obligation and insider dealings. These factors have been discussed underneath. (Akyoo and Leonidas 2011:3-4)

Inadequate Collateral Confirmation

Akyoo and Leonidas, (2011:4) explains collateral confirmation as one of the extremely significant issues in the credit business. Management staff never goes to the village to prove collaterals before giving out the loan. The largest part borrowers stated to offer their houses as collateral but most of these houses are mud houses which are positioned in remote areas and are not helpful enough to cover the loan sanctioned. This contributes to loan defaulting as collaterals are extremely poorer when compared to outstanding loan amount.

Poor Repayment Time

Normally, people get credit refinanced prior to the outstanding balance on their preceding loan was full refunded. Thus make them not to feel so obliged to time repayment, but they will time and again wait for the repayment time to end falling into the trap of rising debts. The borrower finally fails to repay his/her loan and ends up with a larger loan with no corresponding monetary responsibility to service it (Akyoo and Leonidas, 2011).

Inadequate Loan Monitoring

There was an administrative civilization in making credit follow-up. Report did not demonstrate any security liquidation as it was confiscated from loan defaulters, was only kept at the SACCOS headquarters waiting until owners would pay back their loans and assemble their collaterals. Some of the properties were doubt and returned to the owners before loan settlement commitments were met.

Agriculture

A report by UNESCO National Commission of The United Republic of Tanzania (n. d: 165), defines Agriculture as the one of the top sectors in Tanzania's economy which contributes significantly to the GDP, accounts for about one fifth of the foreign earnings and support the livelihood of more than two third of the population. It includes: - cultivation of animals, plants, fungi, and other life forms for food, fiber, bio-fuel and other products used to sustain life ILO, (1999). In Tanzania agriculture involves cultivation of land for food and non food commodities and keeping of traditional animals for human consumption. It includes subsectors such as; horticulture, grain and cereals, oils seeds (edible and non edible), cash crops including coffee, cotton, sisal and tea. Over 80% of the poor are in rural areas and their livelihood depends on agriculture. Moreover about 80% of the population live and earn their living in rural areas with agriculture as the mainstay of their living (URT 2011).

Factors for Agriculture Sector Growth

The process of economic growth is determined by two types of factors;-economic and non-economic. Economic growth is reliable upon its natural resources, human resources, capital, enterprise, technology and others. Nonetheless the economic growth is not achievable so long as social institutions, political situations and moral ethics in a country do not encourage development. URT (2008) recognized the three critical factors for the growth in agriculture sector. These are facilitator performance, productive factors and operating environment.

Facilitators Performance Factors

The performances of facilitating factors have key impact on the development and growth of the agriculture sector. The most important facilitators for the growth of the agriculture sector are discussed by (URT 2008) in the context of Tanzania situations, these are as follows,-

Agricultural Credits

According to URT (2008), agriculture credit is a fundamental contribution for rising agricultural production and productivity. Institutional finance for agriculture credit is disbursed mostly by commercial banks, community bank and informal lending mechanisms. Access to credit and other financial services is a serious problem to many farmers, from small to large scale farmers. However this issue has been resolved through new legislation, commercial bank continues to be hesitant in approving investments in the agricultural sector as it is seen as a relatively high risk sector.

Infrastructure

The URT (2008) reported further that, poor infrastructure in the country has lead to the increase in the costs of agricultural production process in terms of high costs of transport, increased costs of inputs and maintenance of agricultural inputs and equipments. The roads networks mainly in remote areas are in terrible condition and in most of rain seasons village roads are impossible to travel along. The government efforts in improving roads network and other infrastructure such as communication and utilities are needed and important factors to ensure growth of agriculture sector is attained at a desired rate. High-quality infrastructure helps in raising productivity and lowering unit cost in the production and marketing activities of the agriculture sector.

Horticulture

According to TAHA (2009) horticulture is defined as an agricultural activity that involve production, processing or packaging of flowers, fruits, vegetables, vegetable seeds, spices and roots and tubers. Horticultural products include all products either raw or processed that arise from the horticultural industry.

Agriculture Financing in Tanzania: Horticulture Case

The agricultural financing is considered too risky and expensive to lend to, especially to small scale farmers. Moreover agriculture's low profitability does not allow farmers and agribusiness to earn adequate returns for sustaining livelihood and re-investment in the sector or to attract new investment. At the same time, MFIs in the rural areas are still too weak and few to satisfy the financial requirements of farmers. The commercial banks, financial institutions and MFIs have yet to develop suitable lending instrument for agriculture (URT 2011). The agriculture sector development program provides that, increasing growth, reducing food insecurity, and accelerating poverty reduction, particularly in rural areas, requires an increase in agricultural productivity, higher added value, and improved producer price incentives (URT 2002). These increases also require a consolidation and continuation of long-term reforms, particularly with respect to markets, institutions and investments (URT 2002). In this view, greater emphasis is needed on improved institutional functioning and service delivery, technology adoption, infrastructure development, greater commercialization among smallholders and access to affordable financial services. The Government has taken measures on legal and policy reform to create a favourable environment for agricultural growth from farming to agro-processing to marketing of final products coming from local agricultural raw materials.

The National Trade Policy (2003) was formulated to support trade liberalization initiatives that included gradual reduction of import restrictions, liberalization of foreign exchange transactions, simplification of the tariff structure, abolition of import bans for luxury goods and licensing requirements for exports and allowing the private sector to compete in processing and marketing of cash crops. These systems and structure have been established by the government to facilitate growth

and ensure that the primary beneficiaries are the farmers whether large or small.

In brief no 3. Written by AU, NEPAD and URT (2012), they agree that public investment (from domestic and external sources) aimed at transforming the agriculture sector is critical. Public investment is needed in agricultural technology development (high-yielding varieties, technologies for reducing crop losses and livestock diseases), rural roads, farmers' training, and irrigation systems. Public investment in these "public goods and services" is necessary to entice private investors to establish contract farming and out-grower schemes as well as input distribution and marketing activities. As much as (Kaino and Mashindano 2012) argued that investment in public goods is necessary, they argue that agricultural sector is characterized by strong forward and backward linkages with other sectors and by high potential for a faster and sustainable growth and development. Its development is however constrained by insufficient infrastructure (transport, water, energy and communication), finance and limited access to finance, insecure property rights, poor farming systems which lead to depletion of natural capital and release of greenhouse gases and other pollutants. In addition, there are marketing problems, crop losses due to pests and hazards, food waste in storage, distribution, in marketing and at the household level.

The Government must put deliberate efforts, commit the right resources both human and capital, and create an enabling environment that will address these challenges. Without a genuine commitment in this initiative agriculture development through financing will not have any impact in revamping the sector. The significance of Horticulture sub sector as an important contributor to economic growth has not been given a significant boost by the Government and financial institutions. A report by BOT, 2011, reveals that the agricultural industry is the fastest growing agriculture subsector and one of major

source of foreign exchange earner, employer and contributor to the income and nutrition security among the small scale farmers. The report reveals that the sector generated over USD 350 million in the past five years. The industry had a remarkable growth in earnings attaining a rate of 47.3 percent in 2007. A report by TAHA, 2011 shows an annual increment of 8-10% per annum although export earnings declined slightly in 2009 due to the global economic crisis and subsequently the eruption of the volcanic ashes in Iceland which disrupted flights to Europe for several days. With such tremendous results one would ask why the financial institutions are not financing the industry. A number of reasons prevail and a lot of negotiations have been done between the Government, investors, financial institutions and small scale farmers although they have not yielded to significant results. This study will investigate the bottlenecks and reveal the gap which exists between farmers and financial institutions.

In India, Finance in Agriculture is an important aspect of development of technologies. Technical inputs can be purchased and used by farmer only if he/she has funds. Nevertheless his/her money is always inadequate and needs outside credit. Professional money lenders were the only source of credit and they use to charge unduly high rates of interest and follow serious practices while giving loans and recovering them. As a result farmers were heavily burdened with debts and many of them perpetuated debt, (Surds 2012).

Value Chain

According to Kaplinsky and Morris (2002), a value chain is "the full range of activities involved in getting a product or service from conception, through the different phases of production and delivery to the final consumer." One of the strengths of value chain development is that it considers the producer and product within the larger commercial context. Linking production to global and regional markets, commercialization has led to viewing producers as investment

opportunities that are critical for development of the sector's and country's economic growth and competitiveness.

Value Chain Finance

Value chain finance refers to “the financial relationship between two or more actors within the value chain” (David, 2008). There are two types of value chain finance, direct and indirect:

- Direct value chain finance is finance that one value chain actor provides to another.
- Indirect value chain finance is provided from outside the value chain (usually by a financial institution) based on the borrower's value chain activities (e.g., purchase contracts, advance contracts, promises to buy, or transaction history).

There are many different financial instruments that can be used to engage in value chain finance. The limitations are only the creativity of actors involved and the legal and regulatory framework of the country involved.

Business Models in Agriculture Value Chain

As pointed out by Calvin, (2011) that the strategy used for development or strengthening of value chains depends upon the business model. The term business model in value chains refers to the way it adds value within a market network of producers, suppliers and consumers. The business model encompasses the drivers, processes and resources for the entire value chain system, even if the system is comprised of multiple enterprises. The business model concept is linked to business strategy (the process of business model design) and business operations. If value chain finance is to be successful, the value chain must be viewed as a single structure, with the model of this structure providing a framework for further analysis.

In agriculture smallholder production is important for both economic and social considerations, special emphasis must be given to models which allow them to fully participate in value chains. There are several types of organization of

smallholder production and marketing – that is, the relation of farmers to the market and/or the larger system. The following are some of these organizations which offer a basis for value chain business models as provided by (Calvin 2011).

2.1 Empirical Literature Review

A study done by Campion, Coon and Wenner (2010) reveals that agricultural finance has always been difficult for a variety of reasons including high transaction costs, higher rate of illiteracy high risk, asymmetric information, unfavorable economic policies, lack of guarantees, wide client dispersion, and suboptimal infrastructure in rural areas. This argument has also been reflected in the study by (Manohar and Todd 2010) providing that, financial institutions have demonstrated a lack of interest in agriculture sector for four reasons including disparity of households in remote areas making it difficult for financial institutions to provide cost-effective and affordable services. Second, weather and climate risks have made it difficult for providers of financial services to hedge risks or operate profitable insurance pools. The third reason revealed by the study is that, financial service providers are urban-based and do not know enough about the business of agriculture to devise profitable financial products. The final reason is that most small agricultural producers in developing countries had little education and little knowledge of how financial institutions work.

However, a research done by International Financial Corporation (2011) provided a different argument that financial institutions require support in training, product development, and risk management specific to agriculture.

According to Bagazonzya, Safdar and Sen. (2011) stipulates that, expanding access to rural finance is challenging, and needs to be looked at as a process that includes a combination of factors, including a supportive economic policy and

regulatory framework; appropriate financial and nonfinancial products; and mechanisms, processes, and technology applications that can deliver products and services, improve transparency and accountability, and reduce costs. Moreover the study reveals that supply of financial products and services in rural areas will remain a challenge until financial institutions can reduce the high operating costs associated with catering to rural clients.

Wenner (2010) provides that a farmer can be an able and diligent manager with an excellent reputation for repayment, guaranteed access to a market, and high-quality technical assistance, but an unexpected drought or flood can force him or her to involuntarily default. He therefore argues that Governments, donors, and insurance companies need to collaborate in the development of yield-insurance products that are inexpensive, sustainable, and appropriately designed.

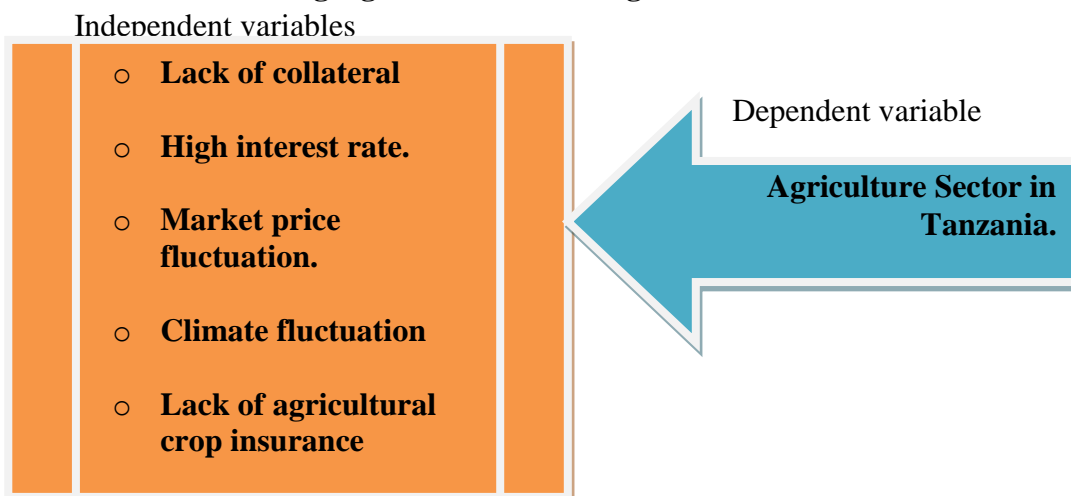
In Tanzania, a study by Kaino and Masindano (2012) appreciated the clear role played by Micro Finance Institutions (MFI's) in economic development of the rural poor communities mostly involved in agriculture. However, the study provides that due to their small capital MFI's have difficulties of extending their services to medium and large scale farmers who need fund

to make big investments. Even if these fund were available most farmers in Tanzania and other developing countries lack access to modern instruments of risk managements such as agricultural insurance, futures contracts, or guarantee funds and post emergency government assistance.

2.2 The Conceptual Framework

According to Smyth (2004) as cited in Jeffels, S. (2012) conceptual framework are structured from a set of broad of ideas and theories that help a researcher to properly identify the problem they are looking at, frame their questions and find suitable literature. Most academic research uses a conceptual framework at the outset because it helps the researcher to clarify his research question and aims. Haralambos and Halborn (n.d) emphasizes that, conceptual framework enables the researcher to find links between the existing literature review and his or her own research goals. Other studies explained a conceptual framework as a tool that a researcher use to guide their inquiry; it is a set of ideas used to structure the research, a sort of map that may include the research question, the literature review, methods and data analysis. Researchers used a conceptual framework to guide her data collection and analysis.

Figure 3.1: Factors Making Agriculture Financing Risk



Source: Author (2014)

RESEARCH METHODOLOGY

3.0 Research Paradigms

Bassey, (1990: para 8.1) as cited in Shirestha, (2009:7) defined paradigm as a broad framework of perception, understanding, belief within which theories and practices operates. Furthermore Bassey, (1990) explained paradigm as a network of coherent ideas about the nature of the world and the functions of researches which adhered to by a group of researchers, conditions their thinking and underpins their research actions.

3.1 Research Design

According to Orodho 2003 as cited in Kombo and Tromp (2011:70), defines research design as the method outline or agreement that is used to create answers to research problem. A research design can be regarded as an arrangement of conditions for collection and analysis of data in a manner that aims to combine relevance with the research purpose. The researcher used descriptive design as the type of the research design on collecting the information through administering questionnaires to farmers, farmer's association (TAHA) and financial institution so as to find out challenges they face when accessing or giving out credit.

3.2 Type and Sources of Data

The study examined challenges of financing agricultural sector and evaluated the possible risk areas that influence financiers' decisions to fund agricultural projects. In the process of data collection, the researcher collected both primary and secondary data to ensure the findings of the study were as detailed as possible.

3.2.1 Primary Data

Primary data are those data which are collected for the first time and they are collected straight from respondents. It involves creating new data and these data are from existing sources (Kombo and Tromp 2011). In this study the researcher used structured questionnaires, focused group discussions with farmers and observation in the

field to gather primary data. Interviews was used mostly with the small scale farmers because some were not have time to respond to questionnaires but also other found it difficult to freely express their opinions through writing.

3.2.2 Secondary Data

Secondary data are those data which are neither collected directly by the user nor specifically for the user. It involves gathering data that already has been collected by someone else. It is analysis of published material and information from internal source (Kombo and Tromp 2011). Secondary data were gathered from reports, journals publications and surveys conducted by TAHA in the area of finance. Findings by other researchers in the area of agricultural financing were used as part of secondary data.

3.3 Study population and the study area

The term population refers to a group of individuals, objects or items from which samples are taken for measurement. Population refers to an entire group of persons or elements that have at least one thing in common (Kombo and Tromp 2011:76). A target population for this study was farmers both small and large scale, farmers associations and financial institutions. The study area involved two regions, Arusha and Kilimanjaro and within these regions the researcher identified two districts which are actively involved in horticulture.

3.4 Units of Analysis and Variables

Unit of analysis is the key thing being analyzed in the research; it is what or who is being studied. This study combined two units of analysis, individuals and organisations. Individuals included farmers and organisations included TAHA and financial institutions. Variables which analysed in this study were dependent and independent variables, dependent variable for this case was horticulture sector and independent variables were those factors which make agriculture financing risky.

3.5 Sampling Procedure and Sample Size

A random sampling procedure was used to select a sample of respondents from the targeted population in order to include the desired and representative sample whose information provided

answers to research questions. Since small scale farmers were many, a random sample approach was used to identify respondents among the farmers groups. A sample size of 48 respondents was distributed as follows:

Table 3.1: Respondents Distribution

Type of Respondents	Number of Respondents
TAHA Staff	5
Large scale farmers	10
Small Scale Farmers	30
Financial Institutions	3
TOTAL	48

Table 1.2: Respondents Distribution in Arusha and Kilimanjaro

Type of Respondents	Region		TOTAL
	Arusha	Kilimanjaro	
TAHA Staff	5	0	5
Large scale farmers	6	4	10
Small Scale Farmers	20	10	30
Financial Institutions	2	1	3
TOTAL	24	14	48

3.6 Reliability and Validity of Data

3.6.1 Reliability

According to Joppe, M. (2000) as cited in Golafshani, N. (2003) explains reliability as the level to which results are reliable over time and are precise illustration of the entire population in study. If the results of the study are capable of reproducing under a similar methodology, then the research instrument is considered to be reliable. Another definition comes from Shirestha, (2009) who defined reliability as the degree to which there is steadiness in one's conclusion. This is improved by the researcher explaining the assumptions and the hypothesis underlying the study, by triangulating data and by leaving an audit trail that is by relating in detail how the study was carried and how the findings were derived from the records.

3.6.2 Validity

Validity may be addressed in terms of correspondence and generalizability; where by correspondence refers to agreement between two sets of measurement procedures for a particular construct or concept. Generalizability refers to the extent to which results are consistent with existing theory or predictive of associated events (Lederman 1991:199).

3.7 Data Analysis and Presentation Methods

According to Kombo and Tromp (2011: 117-118), data analysis refers to examination of what has been collected in a survey or experiment and make deductions and inferences. It involves uncovering underlying structures; extracting important variables, detecting any anomalies and testing any underlying assumptions. The acquired information is scrutinized and inferences are

made. Statistical data analysis divides the method for analyzing data into two categories; exploratory methods and confirmatory methods. Exploratory methods are used to discover what the data seems to be saying by using simple arithmetic and easy to draw pictures to summarize data and this is mainly in qualitative research .Confirmatory methods use ideas from probability theory in the attempt to answer specific questions and it is mainly applicable in quantitative research. The methods used in data analysis are influenced by whether the research is qualitative or quantitative.

3.7.1 Qualitative Research

Qualitative research is a multi-method in focus, involving an interpretive, naturalistic approach to its subject matter. This means that qualitative researchers study things in their natural settings, attempting to make sense of, or interpret phenomena in terms of the meanings people bring to them. It involves the studied use and collection of a variety of empirical materials-case study, personal experience, introspective, life story, interview, observational, historical, interactional and visual texts that describe routine and problematic moments and meanings in peoples' lives (Denzin and Lincoln 1994:2 as cited in Thomas 2003:1-2).

3.7.2 Quantitative research

Quantitative research is the one which tends to base on numerical measurements of specific aspects of the phenomena. It abstracts from particular instances to seek general description or to test causal hypotheses; it seeks measurements and analyses that are easily replicable by other

researchers (King, Keohane and Verba 1994:3-4 as cited in Thomas 2003:2).

The best method to use for a study depends on the purpose of the study and the additional research questions. In this study the researcher used qualitative data analysis methods in the analysis and presentation of findings. The study employed the Statistical Package for Social Scientists (SPSS) to analyze numeric data and in presenting findings that involved comparative analysis. The researcher anticipated massive information because of the data collection methods that were engaged. The researcher used interpretational analysis by looking for patterns (threads, constructs and commonalities) within the data to explain the actual event.

PRESENTATION AND DISCUSSION OF FINDINGS

4.0 Introduction

This part presents and discusses findings obtained during data collection. The presentation and discussion have been categorized into three parts to answer each research questions.

4.1 General Characteristics of Respondents

A total of 48 respondents were interviewed using structured questionnaires. Respondents were divided into two categories where category one constituted of both small and large scale farmers while category two constituted of institutions. Category one had a total of 40 respondent representing 83% of the total respondents while category two had 8 respondents representing 17% of the total respondents. Table 4.1 below provides respondents information as follows;

Table 4.1: Respondents Demographic Information

Demographics		Respondents Category 1 - Farmers				Total
		Large Scale Farmer		Small Scale Farmer		
Region	District	Companies	Individuals	Individuals	Groups	
Arusha	Arumeru	3	1	10	5	19
	Longido	1	1	2	3	7

Kilimanjaro	Hai	2	1	3	2	8
	Moshi Rural		1	2	3	6
Group Total		6	4	17	13	40
Gender	Male		2	7	8	17
	Female		2	10	5	17
Group Total			4	17	13	34
Level of Education	None		0	5	3	8
	Primary		0	5	3	8
	Secondary		1	4	4	9
	College		1	3	3	7
	University		2	0		2
Group Total			2	17	13	32

Source: - Research findings, September 2012.

Table 4.2: Respondents' farm size and their annual income

Demographics		Respondents Category 1 – Farmers			
		Large Scale Farmers		Small Scale Farmers	
		Companies	Individuals	Individuals	Groups
Farm Size	Less than two acres			29.4%	77.0%
	Between 2-5 acres			35.3%	15.3%
	Between 5-10 acres			35.3%	7.7%
	More than 10 acres	100%	100%		
Group Total		100%	100%	100%	100%
Annual Income	Less than 1 million			29.4%	77.0%
	Between 1-5 million			29.4%	23.0%
	Between 5-10 million			41.2%	0
	Over 10 million	100%	100%		
Group Total		100%	100%	100%	100%
Institution Type / Name		Respondents Category 2 – Institutions			
		Region			
		Arusha		Kilimanjaro	
Farmers Association – TAHA		71.4%		0	
Financial Institutions		28.6%		100%	
Group Total		100%		100%	

Source: Field study (2014)

In this study, most of the respondents interviewed came from Arusha region which forms 69% of the total respondents while the remaining 31% came from Kilimanjaro region. This is because Arusha is actively involved in horticulture with more commercial farmers than other regions in Tanzania. Gender featured as a significant aspect

of this study with 50% of the large scale farmers being male and 50% being female. Moreover, gender distribution in the small scale farmers' category was 41.2% were male and 58.8% were female while in the group farmers category 61.5% were male and 38.5% were female. In assessing respondents' level of education, the study revealed that 100% of the large scale individual farmers

had secondary, college or university education while in the small scale individual farmers category 29.4% did not have any formal education, 29.4% went to primary school, 23.5% were secondary schools leavers and 17.7% went to college. Moreover, among the small scale farmers in groups, 23.1% did not acquire any formal education, 23.1% went to primary school, 30.7% went to secondary school and 23.1% were college graduates.

When assessing the size of land which farmers own, the researcher found out that all 100% large scale companies and individuals large farmers had more than 10 acres of land which is committed to agriculture while more than 29.4% of individual small scale farmers had a maximum of 5 acres, 35.3% had between 2-5 acres and 35.3% owned between 5-10 acres of farm land. Among the small scale farmers in group, 77% had less than 2 acres, 15.3% between 2-5 acres and 7.7% had between 5-10 acres. The study also revealed that an average annual income of all 100% large scale farmers is more than 10 million shillings while among the individual small scale farmers, 29.4% earned less than a million shillings, 29.4% earned between 1-5 million and 41.2% earned between 5-10 million shillings per annum. In the small scale farmers in group's category, 77% earned less than a million shillings and 23% earned between 5-10 million shillings annually. The study did not find any small scale farmer earning more than 10 million shillings annually.

4.2 Factors that makes agricultural financing risky in Tanzania

Agriculture financing is one of the challenges that have been impeding the sector from the growth it deserves. When gathering responses from farmers the researcher found out that 25% of the small scale farmers had applied for a loan at least once while the remaining 75% have never applied for a loan before. Out of the 25% who had applied for loans 13.3% applied from microfinance institutions such as PRIDE and SEDA, 3.3% secured their loans from family and friends while

8.3% had applied from Savings and Credit Cooperative Societies (SACCOS) and Village Community Banks (VICOBA). The study revealed that there is no any small scale farmer who had tried to apply for a loan from financial institutions such as banks or mutual funds. When gathering the same opinion from large scale farmers, the study revealed that 50% of the total respondents had applied for loans at least once while the remaining 50% had never applied for loans. Out of the 50% who had applied for loans, the researcher found out that 20% secured loans from financial institutions specifically banks while the remaining 30% sourced their finance from mutual funds. Overall, the researcher found out that only 32.5% of the total respondents had applied for loans at least once during their business operations and 67.5% of the respondents have never applied for loans.

When the researcher asked respondents who had never applied for a loan to provide reasons behind their decision, a number of factors were revealed by each category of farmers. In the small scale category, 49.9% said they had enough savings and earnings from other sources which was enough for them to start horticultural farming while 24.9% secured financial assistance from the government. The researcher found that 75% of the small scale farmers were afraid to borrow from financial institutions and 25% did not want to incur debts. The study reveals that interest rates that are charged on loans were not affordable to 75% of the small scale farmers because they make the loan too expensive. 24.9% of the small scale farmers said they would not apply for a loan because of the short repayment period while 49.9% were reluctant to apply for loans because they are uncertain to pay after they have secured it. Documentation and long application process which consumes a long time were also revealed as one of the factors that makes more than 75% of the respondents to decide against applying for loans.

Most of the large scale farmers who had not applied for a loan had similar opinions to those of the small scale farmers. 50% of the large scale had not applied for loan and out of this 30% said they had enough savings and other sources to finance start up and operations of their businesses. Large scale farmers with foreign origin, around 20%, agreed that they had received financial support from their countries governments. When asked about interest rates charges by local financial institutions all 50% of the respondents said they would not apply for a loan because interest rates were too high to be afforded by agricultural ventures. Only 10% of the respondents said that documentations and application procedures were too long to influence their decision of not applying for loans. A short repayment period is one of the setbacks that make more than 20% of the large scale farmers to avoid applying for loans and the same 20% said that they would not apply for a loan because they are uncertain to repay it because most terms of the loan do not favour horticultural businesses.

When asked to mention the hindering factors that make it difficult for horticultural companies to secure loans, 49.9% of the small scale farmers out of 75%, said collateral for the loan is a major hindrance as most of them do not have title deeds for the farm land they own. All the 75% who have never applied for a loan concurred that most insurance companies do not cover horticulture making it difficult for them to secure loans. Moreover, the study revealed that 49.9% of small scale farmers would not be able to secure loans because they exist as informal businesses, they are not registered anywhere hence they cannot be easily traced. 75% of those who have not applied for loans said climate/ environmental changes have been a hindering factor to most small horticultural businesses to secure loans due to poor irrigation infrastructure. Lack of proper Infrastructure including irrigation, roads and storage, were perceived as a hindrance to secure loans by over 49.9% of all small scale farmers.

Lack of proper infrastructure exposes most small horticultural businesses to risks therefore when applying for loans most fail to pass the preliminary due diligence because of this high risk. The study revealed that 27% of the small scale farmers who were interviewed have never acquired a formal education. This is therefore one of the reasons that most small scale farmers cannot secure loans because they lack the knowledge and skills to manage them commercially. It was found out that 75% of the farmers were adamant that one of the major challenges for them to secure loans is the unreliable markets for their products. The current market fluctuations and dominance by the middlemen has made horticultural business very risky and uncertain which impliedly makes financial institutions hesitate to give loans to horticultural businesses.

The study results revealed that, 40% out of the 50% of the large scale farmers who have never applied for a loan, said lack of agricultural crop insurance is a major factor which hinders many ventures to secure loans from financial institutions. Due to the perishability nature of horticultural products, crop insurance is an important component of the value chain which assures the lender that the loan is safe. Even with high technology that has been invested in most large scale companies, 30% of the respondents said that climate / environmental fluctuations have been a threat to horticultural production and thus financial institutions are very reluctant to give out loans. Only 10% of the respondents viewed market fluctuations as a hindrance to secure loan, however more than 20% of the respondents were of the opinion that lack of proper infrastructure is a major setback to securing loans.

When gathering response from TAHA on factors that make agricultural financing risky, the researcher wanted to know if the association assists its members in accessing loans. All respondents, (that is 100%) said their organization is committed to supporting its members in

accessing loans. Moreover, all respondents (that is 100%) said the association has been working with banks, microfinance institutions and rural cooperatives such as SACCOS and VICOBA in assisting its members to secure loans. When asked if their members keep financial records, 80% of the respondents said yes while the remaining 20% said they do not keep such records. Out of those who said yes, 60% revealed that most small scale farmers keep records of costs incurred during production, harvesting and transportation of their produce while the remaining 20% said some farmers records all indirect costs incurred during production for instance mobile phone charges and time they spend during production. On the other hand, those farmers who do not keep their financial records have been facing challenges in ascertaining profit at the end of the season. This argument is supported by 80% of the total respondents who also added that, failure to keep financial records has made it difficult for farmers to access loans from financial institutions and microfinance institutions.

Business support services are an important component which makes loan application easy and successful. 80% of TAHA respondents concurred that the association provides business support services to its members while 20% said the association does not provide such services. Among the 80% who said yes, all 80% revealed that the association assist its small scale farmers in processing collateral required for the loan such as land title deed. Also 80% of the respondents said loan management trainings have been provided to farmers to build their capacity to manage loans while 20% said the association conducts due diligence or preliminary assessment to ensure farmers comply with all loan requirements. 40% showed that TAHA helps its members to review all required documentations before they submit to the financier for loan processing and another 60% said they association has been negotiating loan terms and interest rates as a support to members who are applying for loans. The 20% who said the

association does not provide business support service to its members said most members have been accessing these services from consultancy companies which have been recommended by financiers.

In assessing if financial institutions have products customized for agriculture about 67% of these institutions said they have such products while 33% said they do not have anything customized for agriculture. Among the 67% who said they have such products, 33.5% said they finance initial investment on long term assets including irrigation facilities, green house structures, tractors, cold stores and other implements which directly support production and harvesting. All the 67% showed they have products for input financing where farmers are given a loan to purchase seeds, fertilizers and pesticides to help them start production. Moreover all the 67% provide overdrafts to accommodate daily operations of the farming business although the overdrafts are commonly given to farmers who are already in business not for the start ups. 67% of the respondents had products customized to support farmers in harvesting and post harvesting although the emphasis is given to farmers using warehouse receipt system. Only 33.5% of the respondents said they provide export guarantee to farmers. The remaining 33.5% said export guarantee is normally given by the Government through the Bank of Tanzania at a very competitive cost making their export guarantee products obsolete in the market.

In the previous findings the researcher found that 33% of the financial institutions do not have products or loans customized for agriculture. A number of reasons were revealed in support of this argument where 33% of the respondents said agriculture is a very risky venture and chances of losing the loan are high. Furthermore all the 33% asserted that poor infrastructure in one of the reasons which makes agriculture vulnerable to risks hence their institutions are not willing to give loans. When asked if the current weather/

environmental trend could be a reason to deny loans to farmers, all the 33% said yes and provided further that most farmers do not have financial education making it difficult for them to access loans.

Most financial institutions, even those providing loans to farmers, regard agriculture as a risky venture. The researcher therefore wanted to know types of risks are involved in agriculture and found out that all respondents 100% said weather and environmental patterns is one of the highest risks which is beyond farmers and financial institutions control. Lack of agriculture insurance to cater for production, storage and transportation of agricultural produce was another risk designated by 67% of the respondents. In the case of horticulture, 67% of the respondents said harvesting and post harvest losses made it very risky to provide loans to horticultural businesses. That notwithstanding, 33% of the respondents said market fluctuations are a major setback to horticultural farmers which exposes farmers into high risks because their products cannot be stored until the market stabilizes. All respondents, 100%, provided that intentional default by farmers is one of the very high risk facing the agricultural industry because most farmers run from banks as they encounter challenges instead of disclosing their problems.

The researcher sought more information on the reason that makes farmers default their loans intentionally. The study revealed that, 67% of the respondents were of the opinion that farmers default their loans because most loan structures are too heavy to their businesses while 33% said improper planning could be the reason of default. All respondents, 100%, were of the opinion that natural disasters resulting from weather patterns are a reason of intentional default. High loan interest rates were suggested by all 100% respondents as a major challenge to farmers which eventually forces them to default their loans. 67% of the respondents said harvest and post harvest losses coupled with market price fluctuations have

resulted into very low return on investment which impliedly makes farmers default their loans. After losing their products most farmers are not covered by insurance to be compensated for their losses therefore 67% of the respondents feel that farmers can easily default repayment if any problem comes in their way. Other respondents forming 67% of all respondents said nuisance taxes imposed by the government including produce cess, service levy and bureaucracy during export have made farmers fail to repay their loans because they fail to compete in the market especially in the international markets.

4.3 Gap that exist between farmers and financial institutions

In identifying gaps that exist between farmers and financial institutions, small scale farmers were asked if they operate a bank account where 50% of the total respondents said yes while the other 50% said no. Among the 50% who said yes, 25% revealed that they operate this account very rare while the remaining 25% operates their account frequently. Respondents were asked if they use other financial services apart from a bank account and 50% said yes they access other services while the remaining 50% said no. Out of those who said yes, 25% said they operate a current account where they use cheques for payments, whereas the other 25% have access to internet banking. Automates Teller Machines (ATM's) are the most commonly used services by all the 50% while SIM banking services are popular to only 25% of these respondents. Among the 50% who said they do not operate a bank account, all 50% said mobile money transfer such as M-Pesa, Airtel Money and Tigo Pesa are the best alternatives available to facilitate their transactions. Moreover the same number of respondents, about 50%, said distance between financial institutions and their villages makes it difficult to operate a bank account, as a result all the 50% are using SACCOS's which are around their areas as an alternative to this setback. 25% of these respondents said they do not have enough

education and therefore they are afraid to go to the banks. Village Community Banks' (VICOBA) were viewed as the best option by these 25% respondents who do not have enough education.

The study found that all the larger scale farmers, 100%, have a formal relationship with financial institutions through a bank account which they operate frequently. When asked if they access any other services from financial institutions apart from bank accounts all respondents, 100%, admitted they enjoy many more services provided by financial institutions apart from bank accounts. Most common services that these respondents are using are cheque payments where all 100% are using this service, telegraphic transfer which is consumed by 50% of the total respondents and standing orders which are accessible by 60% of the respondents. The other popular services which they use include bank overdrafts which are used by 50% of the respondents, internet banking with 40% of the respondents as users and finally fixed deposits which are common to only 20% of the respondents. Among the individual large scale farmers SIM banking services are the commonly used with a figure of 60% of the respondents which ATM's are common to only 30% of the individual large scale farmers.

Among respondents from TAHA who were asked on the causes of the gap that exist between farmers and financial institutions, 80% said geographical distance between the two parties is one of the causes. Most financial institutions are located in urban areas thus farmers are using the most convenient service at the village. 60% of the respondents were of the opinion that lack of education among the farming communities leads to lack of confidence to approach financial institutions. Furthermore 60% of the respondents viewed the introduction of mobile money transfer system as the major cause of the gap between farmers and financial institutions. These services are available at the doorstep of most farmers in the rural areas, therefore they would bother to travel

to town to access their bank accounts because it will cost them money and time. 80% of the respondents said the fact that financial institutions are not in the rural areas has made them ignore the importance of promoting their services to the rural communities whose population is dominated by farmers.

The researcher asked financial institutions if they offer business support services to farmers and the response of 67% of the respondents was yes while the remaining 33% said no. Among those who said yes, 33.5% said the common type of business support service they offer is trainings on farming as a business to help farmers perceive agriculture like any other business. Moreover all the 67% said they train farmers on how to manage finance properly first from their own earning then proper management of loans they will get from banks. Apart from trainings, all the 67% said they assist farmers in evaluating their businesses worthiness and assess whether or not they are able to access loans and the amount of loan the business can carry. Out of the 33% who said they do not offer business support services to farmers, all the 33% said they do not have products customized for agriculture. These 33% also said their institutions do not have human resource with adequate skills and experience in agriculture to create proper products and services which can be accessible to farmers. Moreover all 33% respondents said they do not have customers who are commercial farmers. When asked on other causes of the gap between them and farmers almost all financial institutions had a similar opinion that farmers are remotely located to be reached by most banks. According to the 33% of the total respondents, most financial institutions were facing a fierce competition from mobile money transfer such as M-Pesa, Tigo Pesa and Airtel Money. Moreover, 15.5% of these respondents said their institutions are using village cooperative societies to reach farmers and other borrowers from the rural areas.

4.4 Strategies used by financial institutions to give loans to farmers

In assessing strategies used by financial institutions to give loans to farmers the study revealed that 67% of the respondents said their institutions are promoting products through farmers associations such as TAHA. Other respondents, about 33.5% are using the strategy of creating demand from farmers by first training them on how to apply for loans and managing them which eventually makes farmers start applying for loans. Some financial institutions which are 33.5% of the respondents go to the villages to promote their products and services to farmers which eventually results into loans applications. Moreover, 33.5% of the respondents said their institutions have engaged village cooperative societies in providing loans to farmers. A farmer who needs a loan must be a member of SACCOS for a particular period before applying for a loan. In the case of large scale farmers, all respondents, about 67% said they have been visiting farmers in their farms and promote the type of loans they have.

4.5 Impact of financing agriculture in Tanzania

In examining the impact of financing agriculture in Tanzania, the researcher narrowed down her findings to reflect the impact realized by the horticultural sector. When assessing reports prepared by TAHA, the researcher found that, the horticultural sector in Tanzania is generally regarded as having started in the 1950s with the production of bean seed for selling in Europe, mainly through Holland. Perishable horticultural exports to Europe started in the 1970s, following Kenya's lead in this area. In the mid-1980s, a cut rose industry was established, followed by the development of a cuttings industry based on chrysanthemums. More recently, there have been specialized investments in the propagation of

hybrid vegetable seeds, higher value fruits and vegetables but also cut-flowers other than roses.

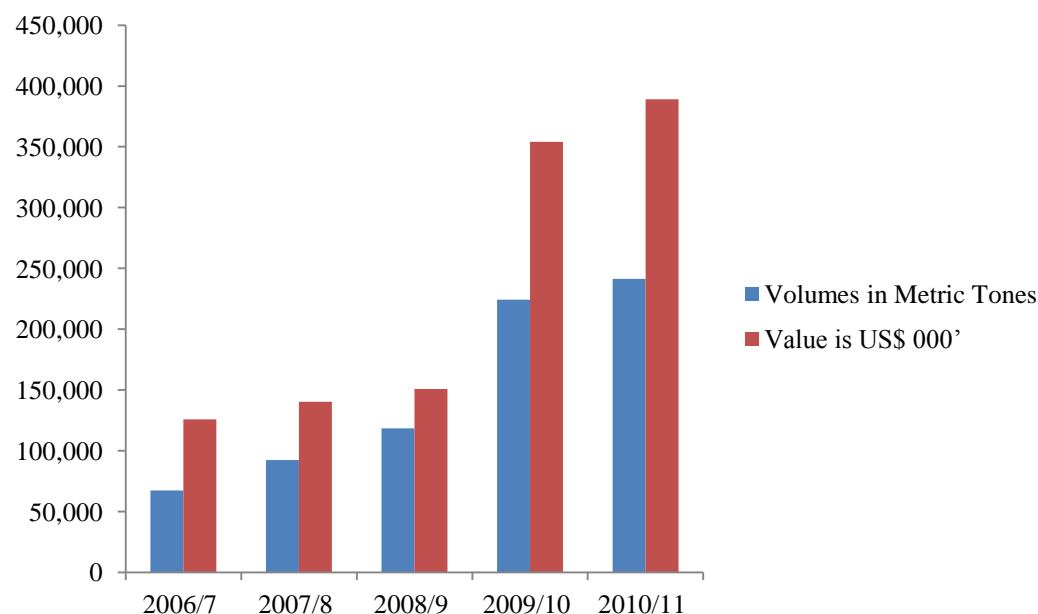
The study revealed that horticultural industry financing did not start long time ago, most companies which were established using funds from other sources received finance from the Government of Tanzania through the Tanzania Investment Bank in the early 2000's. The government of Tanzania provided more than \$ 50 million in loans to speed up expansion of existing companies and new companies to emerge in the sector. Through that support the sector realized a growth rate of 8-10% per annum. This made it to be recognized as an engine for country's socio-economic growth and a significant contributor in the poverty alleviation mainly in the rural areas in Tanzania. Apart from the high annual growth rate, the researcher found that Government effort to finance horticulture resulted into an increase in Foreign Direct Investments (FDI's) by 61% while on the other hand the current businesses expanded at a rate of 23%. These massive investments and expansions enabled the horticultural sector to increase its annual income from \$ 1.4 million per annum in 2002 to over \$ 389 million per annum. The researcher found that this increase in annual income had a positive effect to employment where in between 2008 and 2012 employment has increased at a rate of 67% in four years. Even with all these achievements, the sector has not been able to realize its full potential because there are no proper financing mechanisms to help small scale farmers to grow and new companies to invest. The researcher noted that Tanzania has the potential to produce 2 million metric tones of fruits per annum with a value of more than 1.2 billion dollars if proper financing mechanisms and infrastructure are put in place. The table 4.3 and figure 4.1 illustrate a summary of horticultural exports from 2006 to 2011

; Table 4.3: A summary of horticulture export trends in volumes and values for 5 years

Year	Volumes in Metric Tones	Value is US\$ 000'
2006/7	67,250	125,670
2007/8	92,250	140,340
2008/9	118,300	150,640
2009/10	224,348	354,000
2010/11	241,220	389,128

Source: TAHA 2012

Figure 4.1: Horticulture export trend in volumes and values for 5 years



Apart from the local impact the horticultural industry has had in terms of economic growth and employment the researcher noted that, Tanzania became one of the big players in the world flower markets in 2008. The country entered the top 10

list of the biggest exporters of flowers to the European Union market and number 4 in Africa among the largest flowers producer and exporters. The table 4.4 provides a list of top ten largest exporters of flowers in the EU market.

Table 4.4: Top 10 export countries into the European Union Market

Ranks	Country	Turnover 2008 (mil €)	Turnover 2007 (mil €)	% change	Import share (%)
1	Kenya	252	224	12.7	37.8
2	Israel	88	102	-13.7	13.2
3	Ethiopia	82	57	44.3	12.2
4	Ecuador	43	41	4.2	6.4
5	Germany	37	37	1.7	5.6
6	Belgium	37	36	1.8	5.5
7	Zimbabwe	19	21	-9.3	2.9
8	Denmark	14	8	67	2.1
9	Spain	13	13	2.7	2.0

10	Tanzania	13	11	23.8	2.0
11	All others	69	72	-3.4	10.4
	Total	667	621	7	100

Source: TAHA (2012)

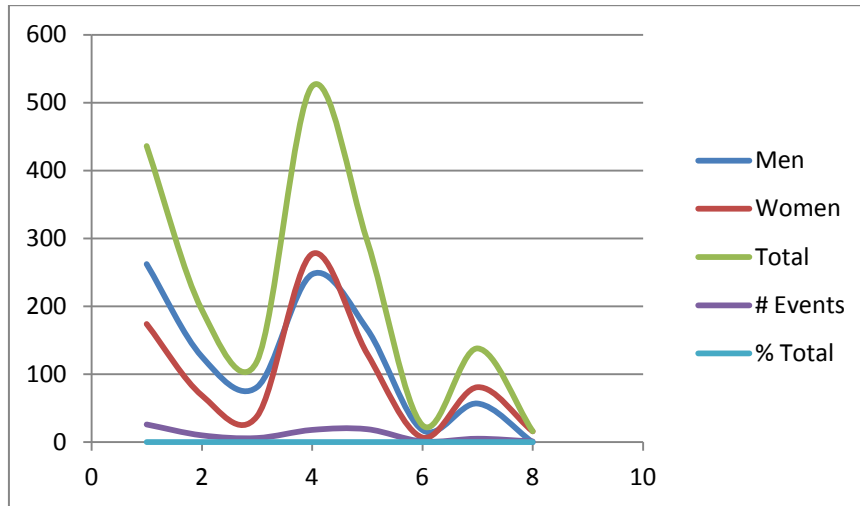
Apart from finances that came from the government of Tanzania, a number of donors and foreign governments have invested a lot of resources which resulted into a huge impact in Tanzania. In the case of horticulture the researcher found that in 2008 the United States Agency for international Development (USAID) invested more than \$ 1.3 million in a project that was focused to support small scale horticultural farmers through contract farming. In this project more that 519 farmers benefited directly and were able to produce 2.1 million tons of vegetables worth more than \$ 240,000 in two years. The project managed to new production technologies to small scale farmers where more than 356

hectors were covered with new technologies. Currently the USAID has increased its funding in the horticultural industry to over \$ 5 million per annum which is focused at supporting small scale farmers to improve production, harvesting and marketing of their produce. The project is named Tanzania Agricultural Productivity Program (TAPP) where TAHA members are the primary beneficiaries has resulted to a huge impact interms of technology transfer, skills training and logistical support. The researcher prepared the table 4.5 and figure 4.2 below as an example of activities implemented by the TAPP project in the month of January 2012;

Table 4.5: Impact of USAID- TAPP support to horticultural farmers

TAPP-Supported Training, January 2012					
Subject	Men	Women	Total	# Events	% Total
Business Skills/Entrepreneurship	262	174	436	26	25%
Crop Rotation	126	69	195	10	11%
Farm Chemical Safety	81	38	119	6	7%
HIV/AIDS	247	277	524	18	30%
Land Preparation	166	130	296	19	17%
Nursery Establishment	18	7	25	1	1%
Nutrition	57	81	138	5	8%
Transplanting	0	16	16	1	1%
Total	957	792	1,749	86	100%

Source: TAHA (2012)

Figure 1.2: Impact of TAPP support to horticultural farmers

Source:- TAHA (2012)

The researcher observed that the financial investment in agriculture has resulted to a huge impact from production, harvesting, marketing and technology transfer. Consequently these have had an impact on quality of produce, volume, farmers' income and in a larger picture rural economic development. The below pictures are some of the observation the researcher made during data collection in Arusha and Kilimanjaro;-



Figure 4.3: A section of drip irrigation technology in production of green vegetables at Longido



Figure 4.4: A small scale farmer showing the quality of her products as a result of financial and technical support in Arumeru



Figure 4.5: Mangoes, butter variety packed ready for export by Tanzania Plantation Limited in Arumeru



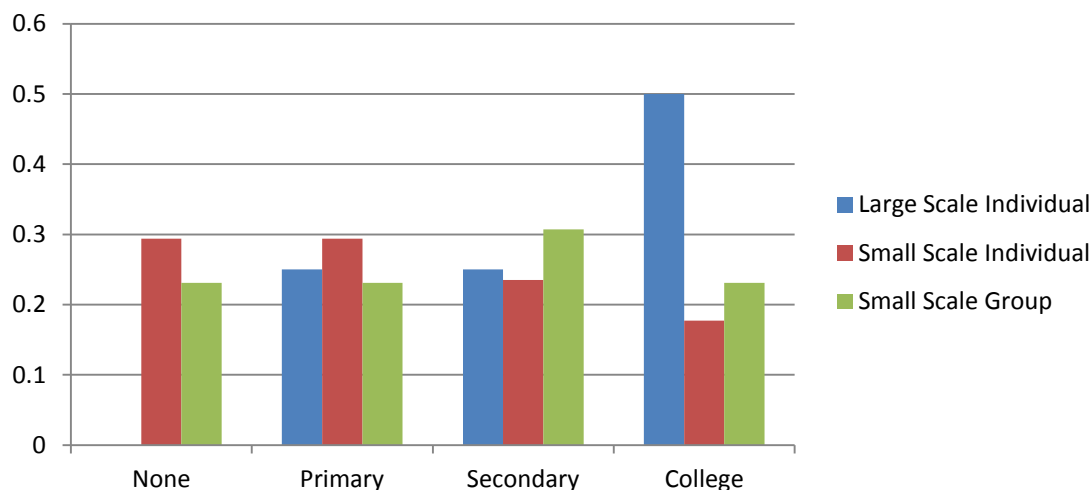
Figure 4.6: Tomatoes produced in a green house under drip irrigation at Hai

4.6 Discussion of Findings

When analyzing factors that make agricultural financing risk the researcher noted that most small scale farmers have never applied for a loan from financial institutions and those who have secured loans, they got them from institutions other than banks. This therefore shows that financial institutions have not done enough to create an environment that will attract small scale farmers to apply for loans. Among the small scale farmers interviewed, the study revealed that 29.4% of the individual small scale farmers did not have any formal education; furthermore another 27% had only primary school education. As a consequence

of lack of education, about 75% of the small scale farmers said they could not borrow from financial institutions because they do not have the skills required to manage loans. Figure 4.7 below shows that, most small scale farmers had the educational level ranging from none to college level compared to the large scale farmers who had reached university level. When it comes to loans application the study revealed that most large scale farmers had applied for loans compared to the small scale ones, one reason being confidence to approach financial institutions because of the education level.

Figure 4.7: Level of education among famers

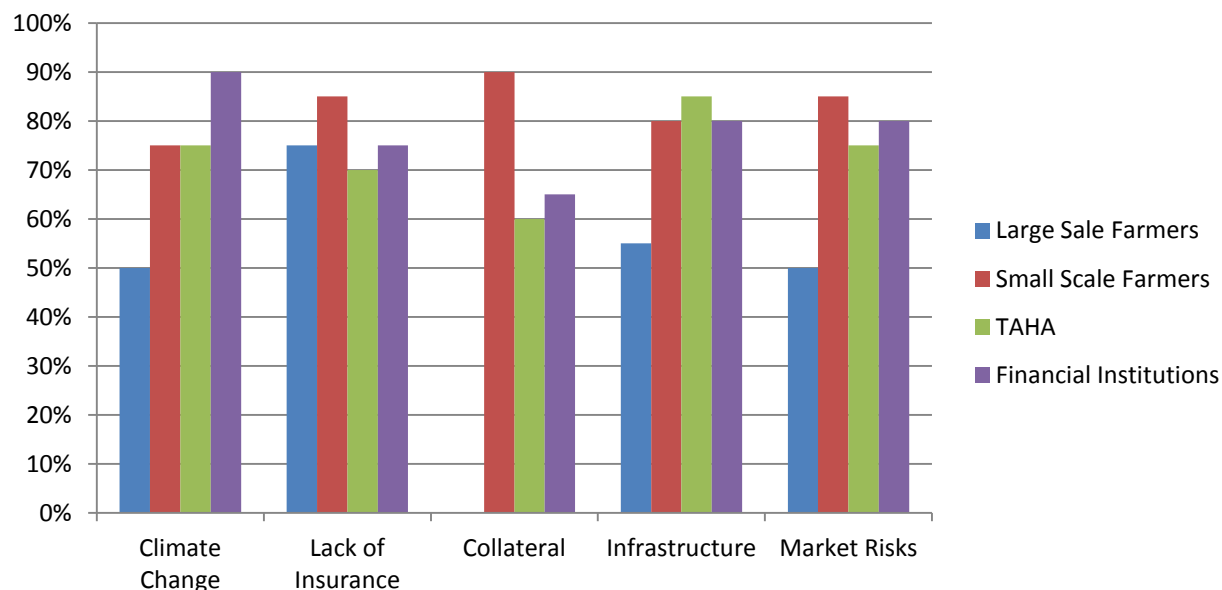


Source: Field study (2014)

The study findings revealed a number of factors that respondents said that they are making agriculture financing risky. Unpredictable weather pattern was one of the reasons which on average a high percentage of respondents saw it as a major setback. Lack of agricultural insurance was a major reason for all respondents while lack of collateral was not a concern for all large scale farmers because they could use their registered farm land as security. The study provided further 4.8 shows a comparative analysis of responses from the four respondents who were involved in the study.

that TAHA viewed lack of infrastructure as the major challenge to financing but large scale farmers did not see it as a setback while small scale farmers and financial institutions had similar opinions. Most of the small scale farmers were concerned that market price fluctuations are a cause of their challenges to access credit while a few large scale farmers supported this constraint. Financial institutions and TAHA had almost the same views with regard to risks involved with market price fluctuations. The figure

Figure 4.8: A comparative analysis of factors making agriculture financing risky



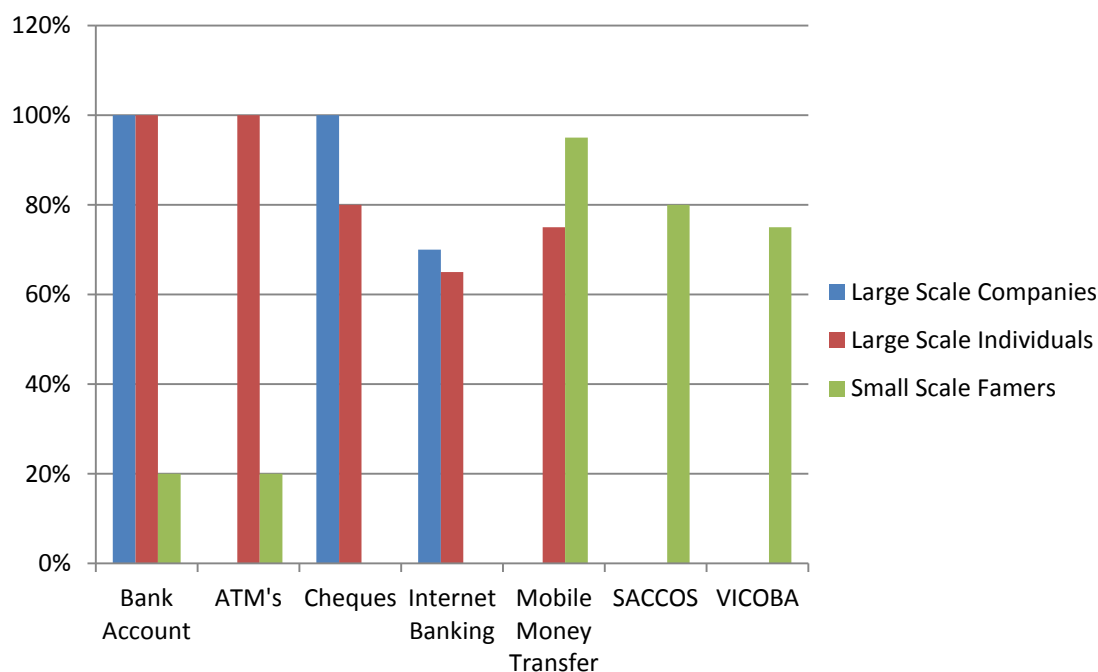
Source: Research findings, September 2012

The study revealed that most financial institutions do not have products or services targeting the small holder farmers. The few financial institutions that have made attempts to serve smallholder farmers have been frustrated and resolved to move out of the sector. There is clearly a big education gap on financial needs for small holder farmers to the financial institutions and farmers alike. The Government of Tanzania has made efforts to support the farming activities by for example the creation of “Kilimo Kwanza” credit programs but the banks who are the implementing partners have no faith in small holder farmers and therefore the money has either remained in the banks or lent out to other sectors of the economy. It is important to mention here that distance between farmers who are in the rural areas and financial institutions has made many small scale farmers to use mobile money transfer systems such as M-Pesa, Tigo Pesa, Ezy Pesa and Airtel Money as easy and cheap alternative to perform their financial transactions. The study revealed that most small scale farmers would prefer to use mobile money services than running a bank account.

The study revealed that most financial institutions do not have a close relationship with small scale farmers mainly because of geographical distance, farmers fear to approach banks and competition from mobile money transfer. When asked if they have products customized for horticulture, these

institutions openly said they are avoiding the horticultural sector due to its inherent risks associated with farmers poor planning, lack of commitment and climatic problems like drought. The researcher found that these institutions have done efforts towards serving the small scale farmers through cooperative societies whose membership is mainly small entrepreneurs. Most cooperative societies have been offering loans at interest rates between 13% and 21% p.a. with a loan application fee of 1% of loan amount. Institutions that do not give loans to farmers were very categorical that they would not consider a credit facility to small holder farmers because they do not have the technical capacity or even the infrastructure to deliver loans to small holder farmers.

In assessing financial services that most farmers are using, the study revealed that large scale farmers are using bank accounts, ATM's, cheques and internet banking. A few individual large scale farmers are using mobile money transfers. On the other hand, the study show that most small scale farmers are using rural cooperative societies SACCOS and VICOBA for their financial activities but the highest number is using mobile money services. Only a few small scale farmers are using bank accounts and ATM services which is evidence that there is a big gap between small scale farmers and financial institutions. The figure 4.9 shows distribution of services among the different categories of farmers

Figure 4.9: Type of financial services mostly used by farmers

Source: Field study (2014)

SUMMARY, CONCLUSIONS, RECOMMENDATIONS AND POLICY IMPLICATIONS

Summary

This study was assessing challenges facing agricultural subsector in accessing credit from financial institutions. The researcher used the horticultural subsector as the case where a number of key players in horticulture were used as a source of primary information and resources that have been prepared by TAHA were used as a source of secondary information. The study examined factors that make agricultural financing risky with a view of identifying the main risky in agriculture. Also the study went further to identify gaps that exists between farmers and financial institutions and examine their implication in agricultural businesses. Strategies that financial institutions engage in providing loans to farmers were part of the study scope which provided a deeper understanding of the areas that needs to be improved in the future. Finally, the study assessed the impact of agriculture financing in Tanzania with a focus on horticulture subsector where it was found that there was a significant economic, social and environmental impact as a result of

enormous financial investments done by the Government of Tanzania and donor organizations.

Conclusion

The study revealed that most financial institutions still perceive agriculture as a very risky business because of unpredictable weather trends, infrastructural challenges, farmers little of education, markets fluctuation, transportation challenges, lack of modern production technologies and absence of agricultural insurance. While financial institutions provided a number of reasons to justify their argument, farmers said they would not be willing to borrow from financial institutions because of high interest rates, complicated loans structure, bureaucratic loans application procedures, unreliable climate, poor infrastructure in rural areas, fluctuating market prices, lack of collateral and high costs of agriculture insurance. Both financial institutions and farmers admitted that there is a gap between them that is caused by geographical distance between both parties as well as easy alternatives from mobile money services such as M-Pesa, Tigo Pesa, Ezy Pesa and Airtel Money. Moreover, farmers' low level of education made them fear to interact with financial institutions and thus most

have been running to rural cooperative societies such as SACCOS and VICOBA as an easy source of credit for their businesses. On the other hand, financial institutions admitted that they have not been promoting their products to farmers especially the small scale category which forms the largest population of the farming community. Lack of mechanisms to offer such loans to small farmers and lack of personnel with adequate knowledge and experience in agriculture were some of the reasons.

The study revealed further that, most financial institutions which offer loans to farmers are using rural cooperative societies as one of the strategic partner to reach the rural poor. They also use farmers associations to market their products and services but also go an extra mile to negotiate interest rates, terms of loans and conduct trainings and preliminary assessments. The role of farmers associations in mobilizing financial resources for agriculture development is recognized and appreciated. More specifically, the contribution of TAHA in horticulture has been noticed and the association stands out as one of the most effective farmer's platform in Tanzania. Through TAHA commitment, government and donors support, the horticultural sector has made a visible impact to social and economic development in the country. Some of the notable achievements include increase in employment by 67% in four years, a significant increase in export volume and value, transfer of technologies to small scale farmers and increased food, income and nutritional security among the rural communities. The researcher therefore views agriculture financing as a key ingredient in stimulating economic growth and poverty reduction in Tanzania.

Recommendations

Based on the findings of the study the researcher wishes to make the following recommendations to the government, financial institutions, farmers associations and farmers:

- The Government of Tanzania should appreciate the importance of agricultural development as a catalyst to social and economic development by committing more financial resources to stimulate agricultural development.
- The government should give incentives to financial institutions which will support the farmers, especially small scale farmers who do not have the knowledge and capacity to access loans from financial institutions. It should be noted here that not all financial institutions should be given those incentives but also those which have proven working delivery systems and methodologies to provide credit to farmers.
- The government should move from organizing agricultural workshops, seminars and conferences to discuss challenges in agriculture. These activities have not brought any fruitful solutions to the sector or to farmers. It is high time for the government and its institutions to continue committing financial resources directly to farmers to bring practical and sustainable solutions to these challenges.
- Financial institutions should appreciate that agriculture development in Tanzania is inevitable thus their commitment to ensure these developments are achieved is needed. The researcher recommends that financial institutions should create products and services which are meant for supporting agricultural growth. Farmers should be given a special priority and attention when they start applying for a loan but also their capacity to manage these loans should be built to reduce risks.
- This study revealed that interest rates charged by banks are too high for agriculture and many farmers could not afford loans because of these rates. The researcher recommends that the Bank of Tanzania and financial institutions should work together to restructure these rates to ensure that agricultural loans are given a

special interest rate. Moreover, a special consideration should be given to loans that go to small scale farmers as a way of stimulating their businesses growth and capacity to afford bigger loans.

- As a way to reduce the gap that exists between farmers and financial institutions, the study recommends that financial institutions should engage farmers associations in their promotion strategies to ensure that farmers are aware of services they provide. Also, financial institutions should empower rural cooperatives such as SACCOS and VICOBA to be their agents in providing credit to farmers. This will reduce risks but also give them an opportunity to reach more farmers without having a physical presence in rural areas.
- It is important for farmers associations to develop mechanisms that will sharpen farmer's financial management skills and business knowledge to reduce risks involved in defaulting loans as a result of mismanagement or poor business knowledge.
- Farmers associations should continue with their current role as apex bodies for agriculture in Tanzania including providing oversight in the development of credit services to smallholder farmers. Associations should therefore play a supervisory and fundraising role rather than direct lending. Moreover, their roles in supporting farmers should focus on; fundraising and advocacy, coordination of periodic surveys to gather information on the new financial products that are available for farmers.
- The study recommends that farmers should put more efforts in building their businesses and exploit any opportunity that comes their way instead of sitting back and blame the government and financial institutions.
- Overall, all stakeholders in agriculture should work with this slogan in their minds; No Farmers, No Food and No Future.

Policy Implications

This study came across a number of policies and strategies that have been developed to regulate activities in the agricultural industry but also to create the conducive environment that will allow businesses to operate smoothly. Findings of this study will contribute toward improving these policies and strategies to ensure that challenges that exist in access to credit in agriculture are addressed and sustainable solutions are in place. More specifically, the study findings will contribute to the KILIMO KWANZA declaration under pillar number 2, which is focused on improving access to finance.

Areas for further study

This study could not cover every area in challenges facing agriculture in accessing credit from financial institutions, and therefore there are some areas of interest which can attract studies in the future. This study focused on horticulture subsector as a case, but another study can be carried out to assess challenges other subsectors are facing in accessing credit. Challenges that horticultural farmers are facing might differ from those other farmers are facing which pave a way for another study on access to credit to be conducted. Moreover another study can be conducted to examine financial tools that can be used to fund small scale farmers without exposing financial institutions into a high risk of losing money.

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APPENDICES

Appendix 1 Questionnaires

Questionnaires Set 1: Large and Small Scale Farmers

1. Demographic information

- Location
 - Region District.....
- Type of farmer
 - Small Scale in a Group ()
 - Small Scale Individual ()
 - Large scale ()
- Gender
 - Male () Female ()
- Level of education
 - None ()
 - Primary ()
 - Secondary ()
 - College / Tertiary ()
 - University ()
- Farm size
 - Less two acres

- Between 2-5 acres
- Between 5-10 acres
- More than 10 acres
- Annual income / Revenue
 - Less than 1,000,000 ()
 - Between 1,000,000 – 5,000,000 ()
 - Between 5,000,000 – 10,000,000 ()
 - Over 10,000,000 ()

Section A: Factors making agricultural financing risky

2. Have you ever applied for a business loan?
 - Yes () No ()
3. If yes, from which source?
 - Bank ()
 - Microfinance institution ()
 - Family/ Friends ()
 - Cooperative i.e SACCOS, VICOBA ()
 - Others, please specify
4. If no, why? Please tick any or all of the following;
 - Had enough savings/earnings from other sources ()
 - Received financial assistance from the government ()
 - Afraid to borrow ()
 - Didn't like to incur a debt ()
 - Interest rates were not affordable ()
 - Too many required documents to submit ()
 - Short repayment period ()
 - Uncertainty in paying the loan ()
 - Other(s) please specify
5. If you were to apply for a loan, which among the following could be the hindering factors?
 - Collateral ()
 - Agriculture / Crop Insurance ()
 - Informal business ()
 - Climate / Environment ()
 - Infrastructure ()
 - Education ()
 - Markets Fluctuations ()
 - Others, please specify

Section B: Gap that exist between farmers and financial institutions

5. Do you operate a bank account?
 - Yes () No ()
6. How often do you operate this account?
 - Very rare ()
 - Rare ()
 - Frequently ()

Section B: Gap between farmers and financial institutions

10. What causes the gap between farmers and financial institutions?

Section C: Uses of loans by farmers

11. Which parts of the value chain do farmers mostly seek financial assistance?

- Land preparation and investment ()
- Production ()
- Harvesting and post harvest management ()
- Transportation and Storage ()
- Marketing ()

Thank you for your valuable time spent on completion of this questionnaire(s)

Questionnaires Set 2: Financial institutions.**Section A: Factors that make agriculture financing risky**

1. Do you have financial products customized for agriculture?
2. Yes () No ()
3. If yes, what type of products do you offer?

4. If no, what could be the reason?

5. What are the risks involved in financing agriculture?

6. What could be the reason for farmers to default in repaying their loans?

Section B: Gap between farmers and financial institutions

7. Do you offer business support services to farmers?

8. Yes () No ()

9. If yes, which type of services do you offer?

10. If no, what could be the reason(s)?

11. What could be the cause of a gap between farmers and financial institutions?

Section C: Types of loans offered to farmers

12. What are the common types of loan that you offer to farmers?

Section D: Strategies used by financial institutions to give loans to farmers.

13. What are the strategies do you use in providing loans to farmers?
