DEDICATION

This work is dedicated to my Sweetheart Mrs Sophia Ojochogwu Adofu, for her love and understanding, my sources of joy, Ephraim Ilemona (Jnr), Precious Ufedo-tule and Gold Ugbede-ojo for believing in Daddy. I also dedicate this work to my father, Late Pa N.M. Adofu for encouraging me to achieve this feat.

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ABSTRACT

The main objective of this study is to examine the performance of Bank of Agriculture (BOA) in financing food crop production in Kogi State, Nigeria. Using a multi-stage random sampling technique, three agricultural zones in Kogi State namely, Anyigba, Ayetoro and Koton-Karfi were chosen. Primary data were collected through the use of structured questionnaire which were administered to farmers who were clients and of non BOA. The major tools of data analysis were econometric and statistical techniques, such as means, percentages regression analysis and z- test statistics. The sampled food crop farmers were mostly males. The literacy level of the food crop farmers loan beneficiaries was above average as more than half the population (69.45%) were literate, and the mean years of experience of respondent was 18 years. The percentage of the amount of loan granted from the amount of loan requested was 61.26%. The most important factors that influenced the amount of loan obtained by food crop farmers were annual household income; amount of loan repaid previously, farm size, borrowing frequency, farming experience and age. The loan repayment performance among food crop farmers in Kogi State was found to be 93.58%.The highest repayment performance was from the Maize farmers with repayment performance of 96.45% while the Sorghum farmers had the lowest repayment performance of 85.82%. The most important factors that determine loan repayment among food crop farmers of BOA were amount of loan obtained, amount of loan requested for, amount of interest paid, farm size and gender of farmers, while the most important factors that determine output of food crop

farmers were amount of loan obtained, farm size, household savings invested, household size, level of education and farming experiences. The endowment of Nigeria in huge expanse of fertile agricultural land, as well as a large active population that can sustain a highly productive, and profitable agricultural sector faces enormous challenges. The paramount challenge is for BOA to increase their outreach so that many rural farmers who produce the bulk of the food crop can benefit from the credit extended by them and again, Lack of information, high interest rate and inadequate personnel training and development were perceived as major constraints hampering the effective functioning of BOA. There is urgent need therefore, for the government to set in motion through BOA, machineries to ensure that information about the products and programmes of BOA is well published, that the interest rate is reduced to a level that the rural farmers can accommodate and to also train the personnel of BOA for effective service delivery.

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CHAPTER ONE

1.0 INTRODUCTION

1.1 Study Background

Agriculture in the traditional Nigerian Society before the advent of colonialism was predominantly crude and only geared towards the provision of food for man. From the use of crude tools like bones and stones, farmers transited to the use of hoes and cutlasses to ease the stress of farming. With the advent of colonialism, there was an urgent need for the improvement in the peasant agriculture so as to enable the colonial masters meet the raw material needs for their home industries. This led the colonial government into direct agricultural production by employing people to work on the farmland obtained by the government for the production of some selected crops like cocoa, cotton, coffee and sugar cane with improved seedlings and farm implement. This policy was put in place to boost agricultural production in the country and ensure self sufficiency in both food and cash crop production (Anyanwu, Oyefusi, Oaihkeam and Dimono, 1997).

The existence of informal financial institutions in the pre-colonial and colonial Nigeria society helped in providing fund for farm projects where such funds were needed. Informal network of financial market participants include money lenders, rotating savings collectors, Mutual assistance groups, and Self – Help Groups (SHGs). The Self – help Groups have long been in existence in Nigeria as informal or semi–formal associations known in different tribes as Esusu or Isusu in Igbo, Adashe in Hausa, Ajo in Yoruba, Yak'khisar in Ngas, Ban in Tiv, Oku in Kalabari and Oja in Igala among others (Adofu, Antai and Alabi, 2010). Despite the effort in this direction of sourcing for fund through informal means and the effort of government at accelerating agricultural production, the sectors performance have continued to decline. This has resulted in the country spending increasing proportion of it's foreign exchange earnings on importation of goods and services hence the slow rate of economic development. In other to improve on the sector's production, various governments identified efforts to promote production. Some of the efforts were reflected in the implementation of special policy programmes and strategies like Operation Feed the Nation (OFN) in 1976, National Agricultural Food Production Programme (NAFPP), Agricultural Credit Guarantee Scheme of 1977,

Nigerian Agricultural Insurance Company (NAIC), the establishment of the defunct Marketing Commodity Storage Boards in 1978. Others include; the establishment of Universities of Agriculture in 1988, the National Directorate for Employment (NDE), and the Agricultural Development Programmes (ADPs). For further development, government intervened in agricultural financing by establishing financial institutions like the Nigerian Agricultural Co-operative Bank (NACB) in 1973, which was later renamed, Nigerian Agricultural Co-operative and Rural Development Bank in 2001after merging it with the People's Bank (PB) and the Family Economic Advancement Programs (FEAP). (Adegbite, 2005). In 2010, it was renamed once again to Bank of Agriculture (CBN, 2010)

The discrimination against agriculture in granting of credit and the high rate of interest coupled with stringent conditions like the issue of collateral and the short term nature of credit granted by the formal financial institutions like the First Bank, Union Bank, United Bank for Africa and Afribank now Mainstreet Bank was one of the factors that led the government into adopting a policy measure that was expected to ensure easy flow of credit and financial services to the agricultural sector and

hence the birth of Bank of Agriculture (BOA) and other Micro-finance agencies.

Nigeria is endowed with huge expanse of fertile agricultural land, as well as a large active population that can sustain a highly productive, and profitable agricultural sector. This enormous resource base if well managed could support a vibrant agricultural sector capable of ensuring self-sufficiency in food crop production and raw materials for the industrial sector as well as, providing gainful employment for the teeming population and generating foreign exchange through export. The issue of agricultural finance could easily be said to be the most critical of the constraints in achieving this position, as it is vital to the development and procurement of appropriate technology, design and construction of necessary infrastructure, development and maintenance of adequate marketing system, as well as modernization of the land tenure system. Agricultural financing in its broadest sense, involves pre-project planning and feasibility evaluation, taking investment decisions, actual investment and funding of projects, profitable management of project and post project evaluation. This broad concept of agricultural financing ensures that funds channeled

to agriculture are profitably used for its development, with a concomitant spillover and multiplier effect to the other sectors of the economy.

The BOA since inception have been able to provide the specialized services of agricultural financing with the aid of its network of branches throughout the country in reaching out to the small scale farmers. As Adeolu and Taiwo (2004) noted, BOA is not alone in providing specialized services to farmers and non-farmers alike, but other formal financial institutions especially the reformed Micro finance banks had helped in this direction. Apart from increasing the volume of credit from institutional (formal) sources, as opined by Williams, et.al (2007), government policy, especially that which established the BOA, has consciously made the terms of borrowing for farm production relatively more liberal than for other sectors of the economy compared to what was operational before the advent of the specialized agricultural finance institution. These terms include concessional interest rate on agricultural loans, relatively long period of moratorium and relaxation of conditions relating to collateral securities.

Extending the view of Adeolu and Taiwo (2004) to the entire agricultural sector and with increased access of farmers to credit through BOA and other formal financial institutions including the reformed Micro finance banks, financial services would be available to farmers to invest in innovations and modern technology that will guarantee agricultural growth and development, and in a more restrictive sense, an increase in food crop production in Nigeria and Kogi State in particular.

Agricultural lending has become a vital function in financial operations as it facilitates the economic growth, agricultural development and improves efficiency. For a farmer to derive benefits from any institutional credit, the size of the loan, the process of granting such loans, timeliness in disbursement and repayment are very important (Nweze, 1991), apart from level of education, marital status and family size (Ibeawuchi, 2002). Unfortunately, financial lending institutions in Nigeria, often shy away from giving loans to farmers because of high cost of administering such loans and high default rate among farmers as asserted by Nweke and Onyia (2001) as well as Kodieche (2007). The government recognition of the difficulties in attracting credit to the agricultural sector led to the establishment of Bank of Agriculture (BOA) to helped channel

fund to the agricultural sector of the economy. Another notable effort at financing agriculture was the creation of the Community Banks which help in the mobilization of rural savings for investment. These community banks which were formally established by Decree No. 46 of 1992 have since 2005 transformed into micro finance banks in Nigeria.

1.2 Problem Statement

Government policies since independence have been directed towards accelerating economic development with the ultimate aim of transforming the economy into an industrialized one as well as increasing the standard of living of the populace. Agriculture has been identified as one of the sectors expected to act as catalyst for the realization of the government goal of industrialization and raising the standard of living of the people. The traditional role of agriculture in economic development provides the premise for this position. The role includes; product, market, factor, and foreign exchange contributions (Johnson and Mellor, 1961).

Despite the enviable position of the oil sector in the Nigerian economy over the past three decades, (Obiechina, 2007), the agricultural sector has remained the largest and arguably the most important sector of

the economy. The contribution of agriculture to the Gross Domestic Product (GDP) has remained stable at between 30 and 42 percent, and employs 65 percent of the labour in Nigeria (Aigbokhan, 2001). It is estimated to be the largest contributor to non-oil foreign exchange earnings in Nigeria.

As Anyanwu, et.al (1997) posited, more than 80 percent of the rural population of Nigeria is engaged in one type of agricultural activity or the other, it therefore translate to the fact that, most of the employment generated by the agricultural activities are in the rural areas. Apart from those engaged in subsistence farming, the bulk of the agricultural export crop producers are small holder farmers. This goes a long way to confirm the result of past studies which show that large percentage of the rural farmers is among the poor (FOS, 1999). The level of poverty in the rural areas is high and has continued to be determined, largely by the fortunes of agriculture. The poverty situation has affected the standard of living of the rural dwellers, who are mostly farmers and hence their saving habit. Without savings, there can not be investment in improved method of farming.

Government has embarked on various policies and programmes aimed at strengthening the sector in order to continue performing its roles. One of such polices is government intervention in agricultural financing by establishing financial institutions like the Nigerian Agricultural and Co-operative bank (NACB) which became the Nigerian Agricultural Co-operative and Rural Development Bank (NACRDB) and later Bank of Agriculture (BOA).This have generated different scholarly reactions as to the efficacy of government policies and programme in improving the agricultural sector. While Olaitan (2006) maintained that agricultural output, especially, the food crop production has responded positively to the policy reforms, others like Obiechina, (2007) suggested that there has been a general failure of the sector to respond appropriately to the policies like agricultural financing.

The aim of agricultural financing is to prop up farmers to make substantial investment in agriculture and stimulate increased productivity. Since traditional agriculture cannot sustain any capital formation, the capital required for investment in agriculture must necessarily be injected from outside. Thus, an agricultural credit scheme is considered an important component of the Nigerian agricultural development

programme, if productivity must increase. It is also asserted that, the increasing recognition of the need for agricultural financing stems from the desirability to enhance the position of on-farm capitalization in Nigeria agriculture and the fact that the farmers own saving are normally inadequate to finance the various farming activities. Thus, capital injection into the agricultural sector is imperative in view of the unfavourable terms of trade facing agriculture, declining productivity, low level of adoption of improved technologies and the fact that many investors are in favour of low cost quick returns and less risky business ventures compared to agriculture (Oni and Olomola, 1989), hence the interest in evaluating the performance of BOA in financing food crop production in Kogi State, Nigeria.

Based on the above scenario, this research provide answers to the following questions

1. Who is being served by BOA?

2. Does agricultural finance enhance food crop production?

3. Are the rural farmers aware of the various finance services provided for them by BOA?

4. Do the socio-economic characteristics of the rural farmers affect their patronage or otherwise of BOA programmes?
5. Does credit granted by BOA affect output of agricultural product; if so in what way?
6. What are the product and services provided by BOA to the food crop farmers?

1.3 Objectives of the Study

The broad objective of this study is to evaluate the performance of the Bank of Agriculture (BOA) in financing the production of food crops like Yam, Cassava, Maize and sorghum in Kogi State, Nigeria.

The specific objectives are to;

i) identify the socio-economic characteristics of the food crop farmer - loan beneficiaries of BOA in Kogi State as well as the sampled non-beneficiaries and to see if it influences their patronage of BOA programmes.

ii) describe the organization and functioning of the BOA in the State.

iii) identify the products and services that are provided by the BOA to the food crop farmers in the state.

iv) assess the performance of BOA by comparing the funding level of some selected food crops (Yam, Cassava, Maize and Sorghum) and factors influencing them.

v) Isolate the factors influencing the output of food crop farmers' loan beneficiaries in the state.

vi) evaluate the repayment performance and its determinants by the beneficiaries from BOA.

vii) identify major constraints hampering the effective functioning of BOA as well as the possible strategies for a sustainable and successful BOA service delivery to farmers in the state.

1.4 Hypotheses of the Study

The following hypotheses were tested:

1. agricultural financing through BOA has no significant effect on food crop production in Kogi State, Nigeria.
2. there is no significant difference between the amount of loan obtained by the food crop farmers and the amount demanded by them from BOA in the State.

1.5 Justification for the Study

The main objective of agricultural credit policies over the years has been to make adequate credit available to the farmers at the right time and at affordable cost. A policy measure adopted to achieve this during the period 1970 – 1985, was the purveyance of credit to the agricultural sector at concessionary interest rate. Based on the fact that banks were likely to discriminate against agriculture in granting credit facilities, financial institutions were compelled to support agricultural activities through credit quotas at concessionary interest rate. In addition, specialized lending institutions like the BOA were to increase supply and access to credit through concessional lending condition. Government interest in this regard was to make fund available for agricultural purpose and thereby achieve food production that will help solve the food security question and reduce unemployment and poverty at all rural areas.

This study is prompted by the need to evaluate how far the government has gone in achieving her target objective of agricultural financing in Nigeria. The demand for credit by farmers is on the increase daily, reasons being that money is required for improvement on land, for

the purchase of implements, machinery, fertilizers, seeds, and agro-chemicals, the payment for stocks of food and clothing, as well as the payment of wages. This position approximates Idachaba's opinion on the usefulness of fund to farmers (Idachaba 1980). It is also obvious from past studies that, it is not only the potential demand for finance that are high but also the effective demand.

Farmers in Nigeria will suffer serious set back unless production credit is made available on suitable terms that will take into consideration the peculiarities of agriculture in Nigeria. New improved technologies are available the world over that can help farmers boost output, but these technologies cannot be acquired except the fund is available. This is what government involvement in direct agricultural financing has come to do.

Finance is as important to agriculture, as it is to any other sector of the economy, and as such, the study of agricultural finance will to a large extent act as a source of information that will enable government to assess the huge fund outlay to the sector through BOA and make alteration to policies, if necessary, in other to enhance the effectiveness of BOA at increasing food production in Nigeria.

Given this scenario presented above, the evaluation of the performance of BOA in financing food crop production remain an important field for researchers, policy makers and development practitioners. Agricultural finance is important in promoting the development of the agricultural sector. Scholars like Olaitan, (2006) accepted this position of prominence of agricultural finance while others like Obiechina, (2007) disagree on the mode of transmission of the credit to achieve success, as that of government involvement has been a general failure, a controversy that the present study intend to settle. At the present period where Nigeria rely heavily on the importation of food to feed the populace, and the attendant food security question these has raised, considering the large expanse of land available in Nigeria, this study cannot but be apt at this time, as it will be beneficial to the Government policy maker, BOA, financial institutions as well as the farmers.

1.6 Plan of The Thesis

This thesis is organized into five chapters. Chapter one is the Introduction, in which the following were discussed; background to the study, statement of the problem, objectives of the study, hypotheses of the study, significance of the study and plan of the work.

Chapter two deals with the review of the relevant literature. It contains the following; definition of agricultural finance, food crop and production, theoretical framework in agricultural financing, the rationale for rural agricultural financing and the role of finance in agricultural development.

Chapter three presents the methodological approach adopted in this study. This covered items such as: area of study, data collection, data analysis, econometric techniques and a'priori expectations.

Chapter four focuses on presentation of results, analysis and discussion.

Chapter five summarizes the findings of the study conclude and make recommendations based on the findings of this study.

CHAPTER TWO

2.0 LITERATURE REVIEW

2.1. Definition of Concepts

2.1.1a. The Concept of Agricultural Finance

Horme (1977) defines finance by looking at what finance managers do. He argues that finance managers take three main decisions which are: financing, investment and dividend decisions. He went further to define financing decision as that aspect of the finance manager's work that has to do with raising funds needed, what instruments to use and what price to pay for fund. We can then, define finance as a body of principles and theories that deals with raising and employing funds for individuals and organization in private and public sectors of the economy.

According to Igben and Eyo, (2002), agricultural finance is an aspect of agriculture where the principles and tools of finance are used in solving management problems in agriculture. They further defined agricultural finance as an area of study, which exposes the tools and principles, which guide the acquisition and the use of financial resources in the agricultural

sector and the protection of owners' equity capital from risk and uncertainties of the sector.

Adegeye and Ditto, (1985), define agricultural finance as the economic study of the acquisition and use of capital in agriculture. It deals with the demand and supply of funds in the agricultural sector. Agricultural finance need not imply the credit (process of obtaining control over the use of money, goods and services in the present in exchange for a promise to repay at the future date) obtained, even though it almost always does. It can refer to financing of agriculture at the national level or at the farm level. At the national and state level, agricultural finance is concerned with agriculture's contribution to, and share of, the national or state resources as well as the role banks and other financial institutions play in the financing of agriculture as a sector of the economy. At the farm level, agricultural finance refers to the financial management of the farm. The terms agricultural finance and agricultural credit are commonly used interchangeably. This is because the study of the acquisition and use of capital naturally leads to the process of obtaining and using credit. The present study intend to align itself with the position of Adegeye and Ditto, (1985), that agricultural finance is the economic study of the acquisition

and use of capital in agriculture, and also with the extension they gave their viewpoint that, the term agricultural finance and agricultural credit are commonly used interchangeably.

Evbuomwan (1993), exposed the following specific policy objectives in financing agriculture, that is, the reason for the government interest in agricultural finance:

- attainment of self-sufficiency in basic food items, particularly commodities, which consumes considerable share of Nigeria's foreign exchange.
- increased production of food, agricultural raw materials to meet the growing needs of an expanding industrial sector.
- increased export earning enhanced by further processing of agricultural produce and adding value.
- modernization of agricultural production, processing, storage and distribution through the infusion of improved technology and management so that the sector can be more responsible to various demands of a developing economy.

- creation of more rural employment opportunities by engaging in further improvement and maintenance of rural infrastructural facilities.
- improvement in the quality of life of rural dwellers through the provision of social amenities such as portable water and improved health and educational facilities.
- continuous protection of agricultural land resources from drought, desert encroachment, soil erosion and flood.

Administration of agricultural finance involves as a necessity, decision making on the amount of credit, the promising sector which carries anticipated profit, the probability of achieving success despite the risks and uncertainties involved in the use of finance. However, the financial manager requires a sound knowledge of the sources of funds if the financial resources must be acquired and effectively used. Thus, agricultural financing can make possible the creation of food surplus, a stimulated degree of urbanization and brings about improvement among the populace (Adegeye and Ditto, 1985).

2.1.1b Conceptual Framework for Agricultural Financing.

Directed credit Programmes (DCPs) have always been used as a convenient policy tool to direct the flow of financial resources to a specific sector of the population for a specific purpose. In most cases, the targeted sectors are those perceived by the policy makers to be in need of financial resources to conduct a specific activity considered essential for development (e.g, production loan, Agricultural loan and working capital loan). Direct credit programmes are thus used as a policy tool. They are deemed essential in alleviating the plight of the perceived disadvantaged sector of the economy like agriculture in the in the developing economy (Raheem, 1996).

For the purpose of this study, DCPs are defined as credit programmes directed towards the agricultural sector, with funding coming from sources external to the implementing Organization which in this case is the NACRDB. In most cases, DCPs funds are budgetary allocation, grants or loan proceeds from bilateral or unilateral donor organizations. Direct credit programme use subsidized interest rate and hence the adoption of Mckinnon, (1973) and Shaw, (1973), propositions that the structure of the system in most developing countries is characterized by market distortion and financial repression and for the poor to have access to credit, DCPs has

to be adopted as a policy. The provision of fund by the government to the BOA for onward distribution to farmers as subsidized credit is in the sense of directed credit.

2.1.2 The Concept of Food Crop Production

Stephen, (1979), defines food crops as those crops grown for domestic consumption such as Cereals (sorghum, millet, rice, maize wheat, etc.), Root crops, (yams, cassava, cocoyam, sweet potatoes etc.), and fruits and vegetables, (kola nut, oranges, grape fruit, pineapple, bananas and plantains, pawpaw, cashew nut, bee root, carrot, cabbages, cauliflower etc).

Hanson (1978) sees production to involve the manufacturing of commodities and the provision of direct services, such as those of the lawyer, the accountant, the actor, or musician. The aim of production is to satisfy its wants by its own efforts, the extent and strength of it wants decide the activities of the group. Man's earliest wants were for food, clothing and shelter, and in early days it might take all his time and energy to provide him with even a bare minimum of these things. With the development of civilization people's wants multiplied, and more wants

people are able to satisfy, the higher will be their standard. However, few people nowadays satisfy their wants directly. The use of money makes it possible for them to work for money payments, and afterwards to use the money to buy the things they desire which people have made. Under present conditions of economic organization a vast range of good is produced and new commodities are constantly being introduced. People engage in production, therefore, in order to earn the means by which they will be able to satisfy their own wants, and at the same time they are helping to satisfy the wants of other people (Hanson, 1978).

Food crop production therefore can be defined as the growing of crops like cereal, root crops, and fruits and vegetables for the purpose of satisfying the food needs of the populace and generating income that will help meet the other needs of the producers.

2.2 Theoretical Framework

Subsidized credit provision is based on Shaw, (1973), and McKinnon (1973), propositions that the structure of financial system in most developing countries is characterized by market distortions and financial repression which is the main reason why poor and small borrowers do not

have access to financial services. In Nigeria, like in most developing countries, the small scale farmers constitute the core of the agricultural sector, and produce the bulk of the food and fiber used in the country. As observed by Williams and Ogunniyi, (2007), the critical factors that affect productivity at the farm level include, but are not limited to the factors of production such as land and capital, agricultural research, technology, infrastructures and access to support services such as extension service and credit.

The government most often may think it's necessary to intervene in the operation of the financial system with the intention of correcting the short comings of the price fixing mechanism to ensure that what is commercially rational for an individual bank is approximately rational for all. Socially, interest rate charged by banks could be regulated to encourage savings mobilization, ensure and foster adequate investment for rapid growth and development, bearing in mind the view of Goldsmith (1969), that, the financial superstructure of an economy accelerates economic performance to the extent that it facilitates the migration of funds to the best user i.e., to the place in the economic system where the funds yield the highest social return. The opinion of Greenwood and Jovanorie (1990)

clearly approximate the view of Goldsmith (1969). They stated that financial intermediation promotes growth because it allows a higher rate of return to be earned on capital and growth, in turn, provides means to implement costly financial structure.

According to Akiri and Adofu, (2007), the existence of externalities and imperfection in the financial markets of most developing economies has often called for intervention by the government through its appropriate agent to encourage investment and to re-channel credit to those economic units with social rate of returns but low commercial rate of returns like agriculture.

Adofu, Abula and Audu, (2010) opined that, agricultural credit enhances productivity and promotes standard of living by breaking vicious cycle of poverty. In the words of Adegeye and Ditto (1985), agricultural credit is the process of obtaining control over the use of money, goods and services in the present in exchange for a promise to repay at a future date. The crucial state of interest rate and credit in agricultural production and development can also be appraised from the perspective of the quantity of problems emanating from the lack of it. In modern farming business in

Nigeria, provision of agricultural credit is not enough but efficient use of such credit has become an important factor in order to increase productivity.

It is important to state that one of the important support services for increased agricultural productivity is credit. This is because, a credit enables the producer to procure inputs, hire labour and process equipment, etc. Credit is also important because equity capital is seldom sufficient to meet the expenditure on production. This need for credit is more acute in the rural areas because access to local financial resources is restricted by the low productivity and widespread poverty of rural people which has led to the dualistic structure of developing countries – a large traditional agricultural sector with low productivity and a small modern sector of industrial and other highly productive export related activities. Because rural people are thought to be too poor to save or receive credit, efforts to mobilize savings and provision of credit have, for far too long, been concentrated in the modern sector (Adegeye and Ditto, 1985).

The usefulness of credit to the various area of agriculture cannot be over-emphasized, but the supply of agricultural credit has been inadequate.

As Olayide (1979), opined, inadequate credit hamper small holder farmer's adoption of mechanical, biological and chemical innovation necessary for structural transformation and expansion of rural agricultural productions. In the view of Chidebelu (1983), one of the major constraints to increase agricultural production is lack of credit. Lack of credit does not only affect increased production but also adoption of mechanical innovations.

Nwosu and Ogunfowora (1977) described the economy of the peasant farmers as a vicious web of low productivity. For the cycle to be broken, the farmers must be helped to realize their productive potentials through the provision of required productive resources, especially capital, when lacking, has been identified as one of the factors militating against rapid agricultural modernization in Nigeria. In the opinion of Chidebelu (1983), the inadequate and often times dearth of credit for financing agriculture in Nigeria has been a major impediment to the country's agricultural development over the years. This major impediment has resulted in the economy of the peasant farmers being described as a vicious cycle.

As Ortese and Yaapera (2004), noted, agriculture and food production seem to be important elements in national economy and human existence. It is on the basis of this that the then President Obasanjo said on a television interview on 30th June, 1999 that agriculture was the first priority of his administration. Over the years the planning, formulation and implementation of agricultural programmes and policies have not yielded expected positive results. According to Akin-Aina (1993), the Central Bank of Nigeria's Annual Reports for 1990 showed that agricultural export which totaled 33.9% of all export earning in 1970 had fallen to 1.9% in 1981. At the present, of the country's 71 million cultivatable hectares, only 34 million hectares have been cultivated. Consequently this has resulted to inadequate supply of food items to the teeming population of over 140 million people. This is a pointer to serious food insecurity in the country.

According to Akin-Aina (1993), the issue of government under-funding of agriculture in Nigeria has been the bane of food production in the country. For instance, for the 1993 fiscal year, the recurrent expenditure estimate for agriculture was put at ₦93.5 million as against ₦27.6 million for 1992, an increase of 239 percent. While the allocation for

the agricultural sector in 1992 was 4.83% of total expenditure, it dropped drastically in 1993 to 1.23 percent. In another direction, the 1994 Central Zone of Nigeria Report on National Agricultural Research Strategic Plan, highlighted poor funding of Agricultural Research Centers as the main problem facing the linkage of new technologies with the requirements of the self-sufficiency and self reliance policies. It is against the backdrop of inadequate fund, (₦305.5 million) allocated to NALDA in the 1993 budget to clear 1,500 hectares of land in 30 states that Akin-Aina (1993) observed that, going by the current rate of inflation "if the whole amount (₦305.5 million) is used for land clearing at the rate of ₦2, 000 per hectare, six to ten years will be required to implement government policy".

Lack of credit facilities has been identified as an important constraint to food production and modernizing agriculture, especially, among the poverty-stricken small-scale farmers who need cash credit to purchase farm inputs such as organic fertilizers, herbicides and insecticides, farm equipment and to hire labour, Odoemenem (1998). To worsen matters, Akin-Aina (1993) laments that farmers cannot afford to take loans from commercial banks because of high interest rates which sometimes go as

high as 30%. Even before then, such banks require collateral from farmers who cannot afford it.

Commenting on the issue of collateral, Miller (1975) opined that the problem here has been that of farmer's inability to provide collateral rather than availability of the loan itself. Banks often require additional security for the loan beyond the borrower's integrity. This becomes a problem to Nigerian small holder farmers because farmland is generally held in communal ownership.

The pauperization of Nigerian farmers is as a result of government policies. For instance, the General Babangida's economic policies of Structural Adjustment with attendant deregulation programme adversely affected farmers. This precipitated hyper-inflation and the prices of support equipment for agriculture increased over ten fold (Akin-Aina 1993). European Economic Community report of 1990 rightly quoted that while it costs two tones of cocoa to buy a tractor in 1976, it would require over 20 tones of cocoa in 1990 to buy the same tractor. While prices of farming equipment have continued to rise, those of export commodities have continually declined. Herbicides, for instance, which sold for ₦250 per liter

in 1978, cost about ₦8, 000 per gallon of 5 liters in 1990. It is against this back drop that Akin – Aina, (1993) concluded that, "the deregulation of the economy has only succeeded in marginalizing farmers". The above picture seems to work against the strategies outlined in the agriculture policy launched in 1987 for sustained development in the next 15 years.

Similarly, the government policy of withdrawal of fertilizer subsidy as well as its distribution process affects poor farmers. The policy of distribution and subsidization did not reduce the gap between supply and demand, nor did they result in lower prices for most farmers. To Akin – Aina (1993) the shortage due to poor distribution and diversion, even by government agencies, forced farmers to turn to black or underground market to buy fertilizer at exorbitant price. Thus, the United Nation's Report on Nigeria (1996) observes that "the low efficiency of the programme combined with the budget deficits of the last several years, mandates a phase out of this subsidy". As a result, merchants procure from NAFCON and sell freely to poor farmers at exorbitant prices nationwide.

Against the financial realities farmers face, all hands are on deck to help them. For instance, Odoemenem (1998) reports that commercial

banks in the country have now placed emphasis on group loan approach in which small-holders are required to form themselves into co-operative societies or farmers council in order to qualify to obtain loan without additional collateral. In 1998, the Union Bank in another approach experimented on lending without collateral to staff of the University of Agriculture, Makurdi. The sum of N5, 000 was given as loan to the staff. The only condition attached is that the staff must be on the payroll of the University and receive his or her salary through Union Bank.

2.2.1 Rational for Rural Agricultural Financing

The characteristics of most developing economies and by extension, the farming communities of these economies are a vicious cycle of low level output, low level income, low level savings and low investments resulting again in low level output. To break this vicious cycle of poverty of farmers is one of the main aims of government the world over. Therefore, caught up in this vicious cycle of low productivity, small holdings and low income, farmers have limited capacity for capital accumulation on which the development of their farm greatly depends. Given therefore their low resource base, the need to create a system capable of financing capital

formation in agriculture becomes important to a discussion on agricultural development in Nigeria.

Over 90 percent of Nigeria's rural population derives their income from agriculture, and almost the entire agricultural food crops grown in Nigeria are from rural areas (Anyanwu, 1998). Rural farming is peasant oriented and small scale. With an agricultural growth rate of 1 percent, the shortfall in meeting our food production requirement is obvious. We are already experiencing the effect of food shortages, prices of stable food are almost out of the research of the poor as well as the middle class in society. Therefore, doing something dramatic to salvage the situation is the opinion of Anyanwu (1998).

Currently, agricultural production in Nigeria is labour intensive and the land tenure system, particularly in the south, does not encourage extensive large scale farming. The onerous task of satisfying the bulk of this country's food needs ultimately rest therefore on the smallholder rural farmers. The rural farmers need assistance especially in form of credit and how to profitably manage credit. Credit is an essential input factor in

agricultural production, considering that the small-scale farmers lack capital.

The reason for financing agriculture and rural development by government is based on four interrelated considerations. First, in Nigeria as in other developing countries of the world, the rural sector is populated by more than 70 percent of the entire population. Secondly, the majority of the rural population derives its income from agricultural and livestock production. Thirdly, apart from the entire rural population, there is also a large portion of the low – income population in the urban sector, which depends primarily on the employment generated by agro-allied industries or businesses. Fourthly, the entire population in the urban and rural areas depends, for their sustenance on the food and supplies that come mainly from the rural sector. All these therefore make rural development a central issue to the overall growth and development of the economy and for improving the living standards of the entire population that derives its livelihood from agricultural production, (Ajakaiye, 1998).

Agu, (1987) observed that no meaningful development in the developing countries can take place without the development of the rural

areas. But one can not talk of rural development without the development of agriculture, because agriculture is the mainstay of the rural economy in the developing countries. Agriculture development is a process involving the adoption by farmers of new and better agricultural practices leading to increase productivity and over all welfare of the economy. It should be noted that credit is not an end in its self, but a means for increasing productivity or expanding production or even increasing consumption. There must therefore be viable income generating activities to invest at the farm level or agro-processing one. Borrowing for production makes sense only if the returns from production can pay for the cost of capital borrowed, and this must apply to poor farmers. Access to market as well as an orientation to produce marketable products is therefore essential for profitable utilization of credit, (Alhassan, 1998).

The provision of credit must be part of a long-term strategy at developing the rural area through the harnessing of relevant resources. This is relevant because credit is not an end in itself, but a means to an end. With finance it becomes possible to harness other factors of capital, technology, infrastructure and extension.

It is asserted that the increasing recognition of the need for agricultural financing stems from the desirability to enhance the position of on-farm capitalization in Nigeria agriculture and the fact that the farmers own savings are normally inadequate to finance the various farming activities. Thus, capital injection into the agricultural sector is imperative in view of the unfavourable terms of trade facing agriculture, declining productivity, low level of adoption of improved technologies and the fact that many investors are in favour of low cost quick returns and less risky business ventures compared to agriculture (Oni and Olomola, 1989).

2.2.2 Role of Finance in Agricultural Development

Agriculture is the oldest industry to mankind, and it is the source of our food and raw materials for many industries. In fact, it can be justifiably referred to as the world's primary industry. However, progress in agriculture had been slow until the industrial revolution in Europe and United State of America. While countries like the USA and Britain have dispensed with primary and laborious methods of farming by developing and adopting mechanized and more productive technological methods, many parts of the world especially Africa are still groping in the pre-

industrial revolution era. However, technology can by itself not develop agriculture, if the conveyor is absent. The conveyor is money or funds. As Lot, (1998) noted, technology cannot reach the entrepreneur unless funds are available for him to acquire it.

The principles of economics and finance have shown us that by using other people's fund along with his own, an entrepreneur is most likely to improve his business substantially than if he had depended solely on his equity. As this principle applies to commerce, so does it apply to agriculture in the developed as well as developing countries like Nigeria. The aim of agricultural development is to prop up farmers to make substantial investment in agriculture and stimulate increased productivity. Since the present economic threshold of traditional agriculture cannot sustain any capital formation, the capital required for investment in agriculture must necessarily be injected from outside. Thus, an agricultural credit scheme is considered as important component of the agricultural development programme (Lot, 1998).

There is no doubt about the crucial role of credit in economic development. Credit can be considered from its ability to energize or

motivate other factors of production. For example, it can make the latent potential or under used capacities functional. In such situations, credit acts as a catalyst or elixir that activates the engine of growth, enables it to mobilize its inherent potentials and to advance in the planned or expected direction. It follows therefore that the greater the influx of capital the more the propensity of the economy to move in its given path. Conversely, if the economy receives less than its due share of credit input, its potentials would be dormant (Ijere, 1998).

The emphasis on credit as an instrument of agricultural development according to Hayami and Ruttan (1971) is based primarily on four perspectives. First, the Schumpterian perspective, which identified innovation as critical element in economic development and credit as essential organizing instrument, which enables the innovations bid resources away from other activities. The second perspective is based on the view similar to that of market reform. The farmers obtain credit and sell his output to the same middleman and are exploited in each transaction. The third perspective is closely related to the second, which views public credit institution as part of the supervised education and credit package designed to induce traditional farmers to adopt modern inputs. The fourth

perspective view credit as an income transfer mechanism to remove inequalities in income distribution in rural areas where intermediate credit institutions obtain their funds from external agencies under concessional arrangement. It is generally held that these institutions are not justified in charging the higher market rate in their own lending operations. As Ijere, (1998) rightly put it; credit therefore constitutes the power or key to unlock latent talents, abilities, visions and opportunities, which in turn act as the mover of economic development.

2.3 Socio-economic Characteristics of the Food Crop Farmers

Research findings of various studies has revealed certain socio-economic characteristics of food crop farmers. As revealed by the works of Adegbite (2009), Olujide (2008), Williams, Ajao and Ogunniyi (2007), Akanni (2007), Adeolu and Taiwo (2004), Imran, Hulme and Rutherfood, (2002) and Olaitan (2006), the age of the food crop producers ranged from a minimum of 27 years to a maximum of 73 years. Majority of the food crop farmers falls within the bracket of 41 – 50 years which implies that they are still within the active working age to be productive enough to repay what ever credit that is granted to them. Most of the food

crop farmers are male, as about 72.5% of the population studied, cutting across the various studies are male. The average household size of the food crop farmers is nine (9). The implication is that the relatively large size will enhance family labour supply on the farms, and hence support productive capacities of the farmers. Most of the food crop farmers have little (primary/secondary level) or no formal education, but due to access to formal credit and information on new farm technologies, their productivities are high and most of them possess positive attitudes towards repayment of loan.

The studies further revealed that, all the food crop farmers handle other minor jobs to supplement their farm income particularly in the work of Adegbite (2009), 10% of the population studied were into petty trading, 28% were Artisans while 62% were involved in other forms of income generation activities.

2.4 Structure, Organization and Conduct of Financial Institutions

The organizational relationship between banking supervision and the Central Banks has been established in many separate ways in different countries. As Goodhart (2000) noted, whatever the details and form of

organizational structure adopted, those in charge of banking supervision and those in the Central Bank concerned themselves with financial stability. There are undoubtedly some changing factors that shift the balance towards a preference for one, or other, institutional structure. Nevertheless, the fact that organizational diversity has been so prevalent indicates that it may not have an overriding influence on outcomes. Despite some studies like Herring and Litan (1995) and Di Noia and Di Giorgio (1999) who observed significant differences on a variety of outcomes dependent on the organizational structure adopted, the practical implication of the observed diversity could be that it is not a matter of first moment. Indeed, the problem of trying to assess the best organizational structure is not made easier by the propensity of all institutions, notably including Central Banks, to argue, and with great cogency, that, whatever their present structure may be, it is optimal, or at least would be if some slight additional funding and powers could be made available to it.

There is an increasing debate towards separating banking supervision from Central Banking, but for this study, we will accept, as a maintained hypothesis, that banking supervisors and Central Bank should be one whatever the organizational structure. The structure adopted matter

because; organizational structure may have some influence on banking supervision, their caliber and professional skills, and the ethos and culture of the organization in which they work. In so far, as the maintained assumption that banking supervisors and the Central Bank must continue to work closely together, hand in glove, remains, and then the obvious solution would seen to be to keep banking supervision within the Central Bank. Information flows must surely be enhanced, differences of view patched up, and decision making expedited and facilitated by such internalization. The fact that price stability and financial stability go hand-in-hand, and have historically always been seen as doing so, would seem to provide a strong *a'priori* argument in favour of keeping them organizationally unified within the Central Bank; Anyanwu, et.al (1997).

In Nigeria, the structure of the Nigerian financial system comprises the regulatory/supervisory authorities, banks, and non-bank financial institutions. The regulatory/supervisory authorities are the Central Bank of Nigeria (CBN) at the apex, the Nigeria Deposit Insurance Corporation (NDIC), the Securities and Exchange Commission (SEC), the Federal Ministry of Finance (FMF), the Nigerian Insurance Supervisory Board (NISB), and the Federal Mortgage Bank of Nigeria (FMBN) (Anyanwu, Oyefusi, Oaihkeam

and Dimono, 1997). The CBN is the major regulator and supervisor in the money market, with NDIC playing a complementary role. The CBN exclusively regulates the activities of finance companies and promotes the establishment of development banks. The SEC is the apex regulator/supervisor in the capital market, with the Nigeria Stock Exchange (NSE) as a self-regulatory institution. The FMF and the CBN share control over Bureau de change while the NISB is the regulatory authority in the insurance sector. The FMBN regulates mortgage finance business in Nigeria (CBN, 1996).

The structure and organization of financial institution can affect corporate establishment both positively and negatively. If the regulatory/supervisory authorities get it right, there will be a positive impact on corporate establishment and the reverse may hold if the regulatory/supervisory authorities get it wrong. Distresses, Bank failure and crisis in NSE, at times, suggest failure on the part of the regulatory/supervisory authorities.

2.5. Products and Services of BOA

These are the various schemes carried out by BOA in order to fulfill its role as a credit provider and guarantee institution in the country. These schemes include: On lending Scheme, where lending is made to established institutions against repayment guarantee for on lending in small scale farming. Direct lending scheme which deals directly with the beneficiaries. Others are Small Holder Direct Loan Scheme which is designed to reach small farmers directly which is meant to meet the increasing credit demand of small scale farmers who produce the bulk of the food requirement of the population. Special Small Holder Loan Scheme designed also to reach small scale farmers but supervised by the state ministry of agriculture and directly controlled by the state governor. Group Lending Scheme, a relatively newer scheme initiated by the BOA in order to further extend credit to increase the number of farmers at premium cost. Workers Scheme, an avenue for workers to earn extra income to enable them contributes to national development and food security. Marketing Loan Scheme which is to ameliorate the problems posed to the small scale farmers by poor transportation network and inadequate marketing facilities. The Bank embark on the granting of loan to clients to enable them purchase excess crop during the farming seasons, store them under effective system and marketing them at the

time of scarcity. Livestock Credit Scheme was created in order to implement the credit component of second livestock development projects (SLDP), a world bank assisted programme of the bank. Agricultural Insurance Scheme, a scheme carried out in partnership with Nigeria Agricultural Insurance Company. Farmers Unit Trust Fund was established to help small farmers' pool resources together for the realization of farming objectives. The pool fund is administered by a trustee manager. Special Project Scheme, a loan packages run by BOA on small scale farmers with fund from international lending agencies (NACRDB, 2010).

2.6 Credit Demand and Disbursed to Farmers by BOA

Table2. 1 Volume of Credit Demand and obtained by Farmers to BOA (1996 – 2006)

Year	Credit Demanded	Credit Obtained by Farmers(₦)
1996	6,415,200	5,080,600
1997	10,804,690	9,087,033
1998	8,405,150	7,801,620
1999	4,608,600	2,080,415
2000	5,817,315	3,996,928
2001	12,733,640	1,048,066
2002	15,483,414	13,200,115
2003	22,941,731	20,111,721
2004	27,816,372	25,212,406
2005	23,941,731	20,111,721
2006	28,816,372	25,212,406
2007	28,954,334	25,785,456
2008	29,556,232	25,987,076
2009	33,657,789	27,323,231
2010	33,675,654	27,767,343

Source: Adopted from BOA Brochure, 2011.

From Tables 2.1, it was observed that for every year, the total credit demand was higher than the total credit granted or obtained by farmers

from NACRDB between the periods of 1996 – 2006. In 2000 the demand was N5, 817,317 while the credit obtained for that year was N3, 996,928. In 2001, the comparison is worrisome, as N12, 733,640 was demanded by farmers, only N1, 040,066 was granted to the farmers. This will have a great effect on farming activity for that year as credit fell short by almost 90%. 2007 – 2010 witnessed a consistent rise in both the credit demand and credit obtained by farmers from BOA.

2.7 Determinants of the Amount of Credit Granted to Small Scale Farmers

In spite of the rapidly expanded agricultural loans in most developing countries, result of conventional agricultural credit programmes especially to small scale farmers have seldom measure up to expectation. This is because of a number of reasons which include the fact that not much progress have been made in reaching the small scale farmers, and where the loan is available, poor loan management has contributed seriously to poor agricultural performance.

Harmonizing the research findings of various studies, like Shaw (1973), Mackinnon (1973), Otero and Rhyne, (1994), Schmidt and Zeitinger (1994), Gallardo et al (1997), Adams and Von Pischkke (1992), Lipton

(1996), Wiggins and Rogaly (1989), Johnson and Rogaly (1997), Binswanger and Khandker (1995), Adegbite (2009), and Akanni (2007), certain socio-economic characteristics have been shown to determine the amount of credit granted to small scale farmers. These include, annual household income, size of the farm, household size, interest charged, volume of loan obtained, the level of education, volume of household assets, age of participants and returns from farming activity

2.8 Determinants of Loan Repayment by the Beneficiaries

Loan repayment is central to loan management especially in agriculture where a high rate of loan delinquency has been recorded. It is a product policy for lending agencies to require that all loan request include realistic stated payment plans or put in another way, a sound institutional loan should be collectable from a planned self liquidation of the borrowers asset or from the anticipated income or profit of the borrower rather than from the forced liquidation of any collateral that may be pledged. Since loan delinquency often arises because of poor loan management, an inclusion of a realistic stated repayment plan in all loan request by farmer act as an incentive to enable the farmers manage the loans effectively and well able to meet the repayment schedule. As Agu (1987) rightly noted,

whenever, a lending institution has to foreclose and sell collateral, it thereby demonstrate that the extension of loan was unsound in the first place even if the credit institution incurs no loss.

One or two basic factors or reasons have been advanced for farmers' delinquency. They are unable to repay or they are unwilling to repay. The inability to repay may result in inadequate income which, in turn, are explained by poor loan management or unexpected event such as bad weather, pests, sudden price decline or by structural deficiencies such as inadequate market, weak infrastructure or poor technology. The main reasons given for unwillingness to repay are that loans to agriculture are viewed as grant or political patronage particularly when the loan is from state owned financial institutions, or simply the borrower plans from the beginning not to repay. These are the harmonized view of past studies like Adegbite (2009) and Akanni (2007).

High rate of loan delinquency or default is widely reported in literature especially among small holder farmers in developing economies. In Nigeria, several researches reported default rate ranging from 9.7 percent to 67.1 percent among smallholder farmers, (Adofu, Abula and

Audu, 2010). Factors affecting loan default include nature and timeliness of loan disbursement, effectiveness of supervision by credit officers, profitability of enterprise on which loan funds were invested, level of education, adoption of technology and time spent on farming business.

2.9 Performance of BOA In Achieving Food Security

Brandt (1987) opined that, Black Africa is the only region in the world where per capita food production has been falling for 20 years at a rate of 1% per annum. More than 12 million tones of cereals were imported in 1984, representing some 15% of the total demand and 50% of the urban demand for food. The causes of the crises are both fortuitous and systematic. Droughts, war and the misery of the refugees are more or less fortuitous, while population growth, urbanization, a food price and marketing policy which discourages production but forms the mainstay of a development policy with "urban bias", neglect of practical agricultural research and agricultural finance – this list is by no means exhaustive – are the main systematic causes.

In Nigeria, the issue of agricultural finance could easily be said to be the most critical of the constraints or the reasons for food crises; as it is

vital to the development and procurement of appropriate technology, design and construction of necessary infrastructure, development and maintenance of adequate marketing system as well as modernization of the land tenure system. Bank of Agriculture was put in place to help achieve most of the above that will help boost food production and provide food security – a situation where the people have access to food at affordable rate and as at when due. Bank of Agriculture has carried out its mandate of timely and affordable delivery of credit facilities to micro, small and medium scale farmers to a reasonable extent bearing in mind the factors that determine granting of credit. The major problems however, facing these agricultural credit institutions, are low credit recovery rates and patronage. As observed by Armah and Park (1998), unless substantial recoveries are made from over due debts, not only will lending institutions, be unable to issue out more loans, there might also be difficulties in meeting legal obligations as they may become crystallized. Armah and Park (1998) also contended that as repayment is the question in lending, the aim of financial assessment is to ensure that the prospects of repayment are high. For any financial organization like BOA, the issue of survival and meeting mandate is considered to be very important especially concerning

the Nigeria Food Security question. For food security to be achieved through financing as provided by the platform of BOA, then, the institution must remain in business. Thus in granting loans the financial institutions must ensure repayment, which is implicit in the credit worthiness of the intended beneficiaries (Adofu, Abula and Audu, 2010).

2.10 Constraints Militating Against Effective Financing of Agriculture by Financing Institutions

In spite of the achievements that have been recorded by institutions, which extend credit to farmers for the development of the agricultural sector in Nigeria, it is clear that many problems still persist. Clearly defined, it has been noted that the farmers and credit granting institutions, as well as the government pose these problems. However, it is evident that the agricultural finance problems, which were well known about a decade ago, have become so magnified today as to dwarf the efforts made by government during the period. The dimensions of these problems continue to increase with any little effort made to solve existing ones (Ekpe, Idiong and Chimemeriom, 2000).

The nature of agricultural production in Nigeria makes it rather a difficult sector for the banks to fund. The majority of illiterate farmers who have small and fragmented holdings ranging from 0.1-0.2 hectare of land, which in most cases, they do not hold title to, characterize it. The illiteracy of farmers tends to have some negative multiplier effect on banks funding of agriculture. Most farmers find it extremely difficult to complete necessary forms for agricultural loan and in some cases farmers have to hire the services of literate people at exorbitant rate (prices) to fill this form. For the same reason, most farmers cannot keep appropriate records, which are often required by the banks to determine the applicants (farmers) credit worthiness. (Okorie, 1985).

The credit institutions are reluctant to extend credit to farmers because they do not meet with the profit motive behind their establishment. They see investment to agriculture as a wasteful exercise and a drain on their profit. Okorie (1985) noted that commercial banks argue that the agricultural sector is fraught with risk due to high loan default arising from *inter alia* government inconsistent policies in the agricultural sector, natural disasters, outbreak of disease and pest, poor management of projects, diversion of funds to other uses, poor project

evaluation by banks, untimely disbursement, lack of or poor supervision and monitoring of project, calculated outright dishonesty and fraud by loan beneficiaries, and several government economic policies such as those affecting inputs, spare parts, and labour.

According to Ekpe, Idiong and Chimemeriom, (2000) formal financial institutions tends to be apathetic towards the credit needs of the small scale farmers in view of the high administrative cost involve in granting loans to these farmers, high default rate of the farmers who have little or no collateral security and the general risky nature of investments, Arene (1992) observed that lending agencies in developing countries are faced with the nagging problem of ensuring credit effectiveness in a sociological setup where government properties and financial assistance are erroneously considered as "booties". According to Okoruen (1981), the problem of financing agriculture should not be confined to meeting the needs for credit and other inputs at a particular time but should extend to meeting these needs adequately as they grow from year to year. For their higher propensity to consume, small-scale farmers divert production credit to consumption, thus constituting a higher risk on repayment of credit.

Even if they use credit for production, the increased income may be used for consumption rather than for repayment of credit.

Agricultural lending, the world over, has one basic problem – diversion of funds. This is not peculiar to Nigeria or the third world alone but it also exists in advanced countries like the USA. This basic problem coupled with the problems of the small holding nature, illiteracy, ignorance of record keeping, lack of knowledge of financial management etc, are what compelled the introduction of supervised agricultural credit to agricultural lending. It has these days become a *sine - qua - non* for agricultural lending to include supervision and monitoring.

Agricultural supervision is a costly exercise especially in Nigeria. However, the advantage of recovering loans and interest by applying it outweighs the disadvantages of losing all, and the legal cost, which may ensue by going to court. One of the reasons that supervision and monitoring is costly is that it entails the use of experts in agriculture, preferably experienced agricultural economists. Other reasons are the need to provide the tools of supervision e.g. an appropriate vehicle, maintenance and operation of such a vehicle, writing papers, traveling and fringe benefit

costs for the staff etc, these cost and the supervision and monitoring of agricultural projects and facilities make agricultural credit unattractive to financial institutions in lending to the sector (Lot, 1998).

Good management is indispensable to run a successful farm; loans are often misused by farmers who do not possess reasonable knowledge of financial management. On this premise, banks usually consider the skill and training of the farmer before approving loans. While many young and energetic agricultural graduates are being turn out from universities and other institutions of higher learning, they are constrained from practicing agriculture because of the banks rigidity in the procedure and requirement of extending loans to people without substantial collaterals (Okorie 1998). It should therefore be emphasized that the problem of financing agriculture should not be confined to the provision of institutional loan-able funds to the farmers, but should more importantly extend to the efficient management of the available loan-able funds. Efficient loan management in agriculture will not only increase the flow of funds to agricultural sector and the rural poor farmers but also will modernize the sector (Agu,1987).

The problem of financing agriculture is one of many such problems facing agricultural sector in developing economies. It has become extremely difficult and complex because it mixes with structural problems to confound the agricultural administrators. (Okigbo, 1981).

2.11 Theories of Economic Growth.

The actions and inactions (policies) of government have their origin from theories of Economic growth and development. Some of them are briefly examined here.

a The Classical – Neoclassical Theory:

This model of economic growth sees growth as a function of capital investment and employment of labour i.e.

GDP = f (CI + EMPL) where

GDP = Economic growth

CI = Capital Investment and

EMPL = Employment of labour.

Capital and labour are assumed to flow from sector with low rates of return and marginal productivities. This is the basis of the demand for high-

yielding enterprises in rural areas. As a result, it is rational to measure the growth status of the country by the levels of rate of return to capital and labour and their marginal productivities (Todaro and Smith, 2009).

b Basic Resource Theory

This theory states that economic growth depends on the availability of basic resources. Availability in this context also refers to the quality and magnitude of the available resources (Todaro and Smith, 2009). These resources where available, can be developed or exploited to create utilities. In this regards one can assess the economic growth of Nigeria in relation to the level of utilization of available resources.

GDP = f (NR + MMR)

Where NR = Natural Resources

MMR = Man Made Resources

c. Dual Economy Model:

In this theory, two sectors of the economy are identified, viz – Rural and urban. The rural sector is assumed to have surplus resources, particularly labour, which can be released to develop the urban sector

without reducing the productivity of the rural economy. This enables us to evaluate the resources situations of rural and urban areas as a way of evaluating government policies (Todaro and Smith, 2009).

d. Export- led Growth Model

This lay emphasis on policies designed to expand export markets that will lead to greater and efficient utilization of ideal resources, capable of enhancing incomes of producers, employment and government revenues. This can be used as a measure for evaluating certain government policies that have been used to stimulate agricultural produce and processing for export (Todaro and Smith, 2009).

e. High Input Pay- off Model:

This model is of the view that farmers are efficient allocators of resources and also respond to economic stimuli, but operates under immense technical and economic constraints. Therefore support is required in the forms of improved seeds, credit and other technical inputs, as well as to output prices. It therefore calls for favourable price policies, which lower input prices relative to assessing agricultural research and prices policies meant to enhance productivities in Nigeria (Todaro and Smith).

f. Diffusion Method:

This attributes productivity differences among farmers to the presence of different access to inputs and adoption capabilities. The need for agricultural extension policies, therefore, arises. Effective extension would educate farmers, increase their skills and productivity and hence profitability of the farm business. There is therefore, the need to examine the impact of extension policies on the economic well being of rural dwellers (Todaro and Smith, 2009).

2.12.Economic Theory of Production

In traditional production theory, resources used for the production of a product are known as factors of production. Factors of production are now termed as inputs which may mean the use of the services of land, labour, capital and organization in the process of production. The term output refers to the commodity produced by the various inputs. Production theory concerns itself with the problems of combining various inputs, given the state of technology, in order to produce a stipulated output. Technological relationships between inputs and outputs are known as production functions (Jhingan, 2009).

The production function expresses a functional relationship between quantities of inputs and outputs. It shows how and to what extent output changes with variations in inputs during a specified period of time. The production function is the name given to the relationship between rates of input of productive services and the rate of output of product. It is the economist's summary of technical knowledge. Basically, the production function is a technological or engineering concept which can be expressed in the form of table, graph and equation showing the amount of output obtained from various combinations of inputs used in production, given the state of technology. Algebraically, it may be expressed in the form of an equation as Q = f (L, M, N, C, F). 2.1

Where Q stands for the output of a good per unit of time, L for labour, M for management (or organization), N for land (or natural resources), C for capital and T for given technology, and f refers to the functional relationship.

The production function with many inputs cannot be depicted on a diagram. Moreover, given the specific values of the various inputs, it becomes difficult to solve such a production function mathematically.

Economists, therefore, use a two- input production function. If we take two inputs, labour and capital, the production function assumes the form: Q = f (L, C)

The production function as determined by technical conditions of production is of two types: it may be rigid or flexible. The former relates to the short run and the latter to the long run (Jhingan, 2009).

2.13 Empirical Literature on Agricultural Finance.

In a study to analyze the repayment performance of beneficiaries of Ogun State Agricultural and multi-purpose Credit Agency, Ogun State, Nigeria, Adegbite (2009) used a multi-stage systematic random sampling technique to select 240 beneficiaries in the 20 Local Government Area of the state. A combination of descriptive statistics, binary choice regression analyses and t-test were used to analyze the data collected. The result reveals that the financial problem of a typical Nigerian small-scale farmer is that of finding fund for expansion at the right time. The repayment performance assessment conducted shows that certain socio-economic factors determined repayment ability of the beneficiaries. Factors that significantly affected the loan repayment were found to be loan volume

disbursed, disbursement lag, age and farming experience. Others include educational level attained, household size and farm location. Most farmers in the area complained of bureaucratic bottlenecks in loans processing which they asserted has affected timely disbursement, hence the diversion and resulting default rates.

Akanni (2007), in estimating the effect of micro-finance on small scale poultry farmers in south western Nigeria, used a multi-stage sampling technique in selecting 45 poultry farmers from 5 western state, bringing the total to 225. Both descriptive statistical method and the Tobit regression model was used to analyze the data collected. The result shows that insufficient funding of small-scale poultry has limited the spate of development of the industry in south western Nigeria.

Olujide (2008), carried out an assessment of micro-credit supply of country women association of Nigeria to rural women in Ondo State, Nigeria. Using a multi-stage sampling method, 160 respondents were selected and information gathered was analyzed using descriptive and inferential statistical analysis. The result shows that country women

association of Nigeria micro-credit had made impact among rural women in the study area.

In analyzing micro-finance as a poverty alleviation measure: a gender analysis, Adeolu and Taiwo (2004) used the simple random sampling technique to select 180 beneficiaries of micro loan scheme. The data were processed and analyzed with the use of simple statistical tools such as the difference between mean, the student t-test and the result shows that micro-finance institution has afforded women better access to agricultural finance, in the sense that almost equal access is afforded men and women in granting of loans.

In evaluating the operational performance of the Nigerian Agricultural cooperative and Rural Development Bank in south-western Nigeria, Olagunju and Adeyemo (2008) used the multi-stage sampling technique to select 300 respondents. Using the Tobit regression model the study shows that characteristic like disbursement lag and cost of obtaining loan have to be taken as control variables for an effective analysis of the determinants of the repayment performance.

Okerenta, (2005), evaluated the performance of micro-finance programmes in the Niger Delta region of Nigeria using the purposive sampling technique to select the sample and both descriptive and analytical method for the analysis of the data gathered. The result shows that micro-finance institutions have great challenges in providing sustainable products and services to numerous people of Niger Delta in Nigeria.

Williams and Ogunniyi (2007), examined the effect of micro-credit on food production using a cross-sectional data obtained from both the beneficiaries and the non-beneficiaries of NACRDB credit in Osun state. Eighty respondents were randomly chosen from each group given a grand total of one hundred and sixty respondents. The technical efficiency indices were examined to access their productivity and its determinants using a stochastic production frontier. It was observed that all the variables fitted in the model have the expected sign and significantly affected the total revenue for non-beneficiaries while , only labour and other costs significantly affected total revenue for beneficiaries.

Okey, et.al (2007), in a study, an empirical analysis of microcredit repayment in southwestern Nigeria, used multi-stage stratified random

sampling procedure to collect data from 2000 customers of microfinance institutions in the study area. Linear multiple regression was used to determine the variables that affected microcredit repayment. The F-values indicated that the microcredit repayment model had good fit (p=0.001) with an adjusted R^2 of 0.36. The variables that significantly influenced repayment are; income, distance between dwelling place and bank, amount of business investment, socio-cultural expenses, amount of loan borrowed, access to business information, penalty for lateness to group meetings, membership of cooperative society, number of days between loan application and disbursement and poverty indicator. The study found that the customers of microfinance institutions are credit worthy and concluded that belonging to microfinance institutions will improve the status of members.

In a study that analyzed loan repayment among small scale farmers in Oyo State, Nigeria, Afolabi, (2010), identified the socio- economic characteristics of the respondents and quantitatively determined the ones that influence their level of loan repayments. A multi-stage sampling technique was used to select 286 respondents in the study area, while multiple regression using ordinary least square to quantitatively determine

the socio-economic characteristics that influence the level of loan repayment among small scale farmers in the study area. The result of the repayment function showed that the included regressors explained 68.4% in the variation of the regressand.

CHAPTER THREE

3.0 METHODOLOGY

3.1 Study Area

Kogi state is one of Nigeria's 36 states, a quintessential Nigeria with three dominant ethnic groups Igala, Igbira,Yoruba and several minorities. Located within the heart of Nigeria, or what is historically referred to as the middle belt of the country, but described in a new political lexicon in the country as belonging to the North Central geopolitical zone.

The state is located between Latitude $7^0$30' North and Longitude $6^0$42' East and occupies an area of 29,833 square kilometers (Kogi State – Wikipedia, the free Encyclopedia, 2010). It is bounded by the Federal Capital Territory (FCT), Niger and Nassarawa States on the North; Anambra, Enugu and Benue States on the East, and Ondo, Kwara, Ekiti, and Edo on the West. The state comprises three senatorial districts; East, West and Central. In the East it is dominated by the Igalas, but with other minority groups like the Bassa Kwomu and Bassa Nge. The central is predominantly Ebira, but with a minority group known as Ebira Koto, and the western

predominantly Okun, but with other minorities, especially the Oworo, Ogori and Nupe people.

The population of the state is put at 3,595,789 million according to the 2006 Population Census figure. About 75 percent of the population lives in rural areas. Kogi state is blessed with fertile arable land because of its location in forest savannah which supports extensive agriculture. Tropical climate in the state is marked by two distinct seasons, the dry season (September – March) and the wet season (April – October). Average temperature ranges from 28^0C to 40^0C (Kogi State – Wikipedia, the Free Encyclopedia, 2010).

Agriculture is the mainstay of the economy. The state produces cash crops like coffee, oil palm, cocoa and food crops such as peanuts, maize, cassava, yam, rice and sorghum. The state is blessed with a lot of mineral resources like coal, limestone, iron, petroleum and tin. The state is home to the largest iron and steel industry in Africa known as Ajaokuta Steel Company Limited as well as one of the largest cement factories in Africa, the Obajana Cement Factory, a subsidiary of Dangote Group of Companies.

3.2 Sample Selection

A multi-stage random sampling procedure was used in this study. The multi-stage random sampling procedure was chosen because it allows for effective and equal representation of all the units within the study area. The sampling procedure is in stages, and the peculiarities of characteristics are taken into consideration at all the sampling stages for equal representation. The Kogi State Agricultural Development Programme has classified the state into four agricultural zones based on the peculiar agricultural activities. They are; Zone A with headquarters at Aiyetoro, Zone B at Anyigba, Zone C at Koton-Karfe and Zone D at Alloma. This will form the basic stratification segments in stage 1

In stage 2, only three (3) of these zones have BOA branch offices and they are: Zones A, B and C. This account for the reason for purposive sampling of these zones. The sample frame consist of BOA loan beneficiaries obtained from the BOA zonal office in Abuja. These were stratified according to Local Government Areas where they operate their farm business. In stage 3 two Local Governments were selected from each of the zones as shown below. The reason for the purposive sampling of this Local Government was because majority of the farmer in our sample frame fall within these Local Government Area.

Zones	Local Government Area's Sampled
A	Kabba/Bunu and Ijumu
B	Dekina and Ankpa
C	Lokoja, and Ajaokuta

In stage 4, a random sampling of 30 farmers – loan beneficiaries were drawn from each of the 6 Local Governments giving a total of 180 samples or respondents. Another 30 non loan – beneficiaries were also drawn from each of the 6 Local Governments making a total of 180 respondents. The farmer – loan beneficiaries in this study are those food crop farmers that cultivate any or combination of the following food crops: Yam, Cassava, Maize and Sorghum so in like manner the farmer non-loan beneficiaries. These crops were chosen because it is widely grown within the study area. The money values of the crops were used as unit of measurement.

3.3 Data Collection

This research work relied on both primary and secondary data. The primary data were collected through the use of structured questionnaire, which was administered to the farmers who have benefited as well as those

who have not benefitted from the credit facilities of BOA in the three sampled zones.

Actual data collection was for a period of about four months (May – August 2011). Preliminary visits were made to all the agricultural zones selected. This helped the researcher to familiarize himself with the study areas. The use of well trained enumerators as field assistants helped in overcoming language barriers and at the same time instills confidence in the respondents that the work is devoid of any suspicion usually associated with taxation. The visits by the enumerators were frequent (weekly). Njoku (1989) observed that repeated interview visits "*per se*" are likely to aid memory recall, because the investigator is coming back for specific information which becomes fixed in the mind of the respondents. Secondary data were collected from Journals, newsletters, bulletins, technical reports, BOA publications, CBN publications and other relevant literature materials.

Variables on which data were collected include:

1. Socio-economic characteristics of respondents (gender, age, occupation, education status, total income, farm size and volume of out-put)

2 . Output of food crop

3. Total income

4. Household expenditures (food, school fees, hospital bills and so on)

5. Household savings

6. Borrowing frequency

7. Loans granted

8. Farm location (Distance from BOA office)

9. Disbursement lag

10. Farm size

11. Interest rate charges on loans

12. Access to fertilizer

13. Volume of loans applied for

14. Volume of loans repaid.

3.4 Data Analysis

The method of analysis adopted is both descriptive and analytical. The descriptive tools consist of the use of percentages, frequencies and arithmetic means. The analytical tools consist of the use of Econometric techniques (Regression Analysis) and Z-test. The statistical packages that were used for this study includes; Microsoft Excel (Ms Excel) and E-view.

Objective 1

Following Adegbite (2009), Olujide (2007), Adeolu and Taiwo (2004), Akanni (2007) and Okerenta (2005), the socio-economic characteristics of the food crop farmers – loan beneficiaries of BOA in Kogi State was analyzed using descriptive statistics like percentages and frequencies.

Objective 2

This involves the organogram of the BOA and fully describing the functions of each organ. The organizational chart of BOA is presented for analysis. This is informed by Olagunju and Adeyemo (2008).

Objective 3

The products and services that were provided by the BOA to the food crop farmers in the state were presented here and discussed. This is informed by Olagunju and Adeyemo (2008), which carried out a study on the Evaluation of the operational performance of BOA in South Western Nigeria.

Objective 4

This objective has two segments; funding level and factors influencing them. The study made use of descriptive tools like percentages, frequencies and mean to analyze the funding level of the food crop farmers by BOA. The choice of percentages and frequencies is informed following Ortese and Yaapera (2004) in their study. Funding of food and agricultural programmes in Nigeria where the credit obtained was compared with the level of credit demanded by farmers. Following Adegbite (2009), Williams and Ogunniyi, (2007), Okerenta (2005), and Igben (1997), this study used multiple regression to analyze the factors influencing the amount of loan obtained by the food crop farmers in Kogi State from the BOA. The first step in using regression analysis is to specify the functional forms of the relationship between independent and dependent variables. The range of

the functional forms considered is limited by constraint imposed by the regression procedure. Four functional forms were treated. They are; linear, semi-logarithmic, double logarithmic and exponential. The form that gives the best fit among the four functions based on statistical and econometric criteria was finally used for the analysis. The general form of the model is.

$Y = f(x_1, x_2, x_3, x_4, x_5, x_6, x_7, x_8, x_9, x_{10}, e_1)$…… 3.1

Where

Y= Amount of loan obtained from BOA (₦)

x_1 = Annual household income (₦)

x_2 = Value of interest charged (₦)

x_3 = Household size (No. of persons/household)

x_4 = Level of education of respondents (Years spent in School)

x_5 = Amount of loan repaid in previous loan (₦)

x_6 = Farm size (Hectares)

x_7 = Borrowing frequency (No/period)

x_8 = Farming experience (Years)

x_9 = Household expenditure (₦)

x_{10} = Age of respondents (Years)

e_1 = Error term.

The functional forms of the equation are explicitly expressed as:

1. linear function

$$Y= b_o + b_ix_i + b_2x_2 + b_3x_3 + b_4x_4 + b_5x_5 + b_6x_6 + b_7x_7 + b_8x_8 + b_9x_9 + b_{10}x_{10} + e_i \ldots.3.2$$

2. semi- logarithmic function

$$Y= b_0 + bilogx_1 + b_{2log}x_2 + b_{3log}x_3 + b_{4log}x_4 + b_{5log}x_5 + b_{6log}x_6 + b_{7log}x_7 + b_{8log}x_8 + b_{9log}x_9 + b_{10log}x_{10} + e_i \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots 3.3$$

3. Double logarithmic function

$$LogY = b_0 + bilogx1 + b_{2log}x_2 + b_{3log}x_3 + b_{4log}x_4 + b_{5log}x_5 + b_{6log}x_6 + b_{7log}x_7 + b_{8log}x_8 + b_{9log}x_9 + b_{10log}x_{10} + e_i \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots 3.4$$

4. Exponential Function

$$LogY= b_o + b_ix_i + b_2x_2 + b_3x_3 + b_4x_4 + b_5x_5 + b_6x_6 + b_7x_7 + b_8x_8 + b_9x_9 + b_{10}x_{10} + e_i \ldots\ldots3.5$$

A'priori Expectations

i) $\frac{dy}{dx_1} < 0;$ The higher the annual household income, the lower is expected to be the amount of loan that is likely to be obtained.

ii) $\frac{dy}{dx_2} > 0;$ The higher the interest rate charged, the lower is expected to be the amount of loan that is likely to be obtained.

iii) $\frac{dy}{dx_3} > 0;$ The more the number of household members, the higher is expected to be the amount of loan that is likely to be obtained.

iv) $\frac{dy}{dx_4} > 0;$ The higher the level of education, the higher is expected to be the amount of loan that would be obtained.

v) $\frac{dy}{dx_5} > 0;$ The amount of loan repaid is expected to exert a positive influence on the amount of loan obtained.

vi) $\frac{dy}{dx_6} > 0;$ The larger the farm size, the higher is expected to be the amount of loan required to cultivate it.

vii) $\frac{dy}{dx_7} < 0;$ Borrowing frequency is expected to exert a negative influence on the amount of loan obtained.

viii) $\frac{dy}{dx_8} > 0;$ Farming experience is expected to exert a positive influence on the amount of loan obtained.

ix) $\frac{dy}{dx_9} > 0;$ The higher the household expenditure, the higher is expected to be the amount of loan that is likely to be obtained.

x) $\frac{dy}{dx_{10}} > 0;$ The more the number of adult members, the higher is expected to be the amount of loan that is likely to be obtained.

Objective 5

Following Ortese (2004) study entitled, "Food Security: a requisite for sustainable democracy in Nigeria,'' and Ortese and Yaapera (2004) study on "Funding of Food and Agricultural programmes in Nigeria: The impact of Government and Credit Institutions'', this present study used multiple regression analysis to assess the factors influencing the output of food crop farmers loan beneficiaries of BOA in Kogi State, Nigeria. Four functional forms were treated. They are linear, semi- logarithmic, double logarithmic and exponential. The form that gives the best fit among the

three functions based on statistical and econometric criteria was finally used for the analysis. The regression is run for yam and cassava separately while maize and sorghum is also done separately.

The implicit function of the model is given as;

$Q = f(x_1, x_2, x_3, x_4, x_5, x_6, x_7, x_8, x_9, u)$ 3.6

Where

Q = Value of the output of food crop selected (yam, cassava, maize and sorghum) (₦)

x_1 = Amount of loan granted (₦)

x_2 = Farm size (hectare)

x_3 = Household size (No. of Persons)

x_4 = Household savings invested (₦)

x_5 = Fertilizer input (Kg)

x_6 = Level of education of respondents (Years in School)

x_7 = Farming experience (Years)

x_8 = Age of respondents (Years)

u = Error term

- Assumption of this model is that Land and Management are assumed to be constant.
- Fertilizer stands as a proxy to other farm consumable inputs.

The functional forms of the equation are explicitly expressed as:

1. Linear Function

$$Q = b_o + b_i x_i + b_2x_2 + b_3x_3 + b_4x_4 + b_5x_5 + b_6x_6 + b_7x_7 + b_8x_8 + b_9x_9 + u \ldots\ldots 3.7$$

2. Semi – logarithmic function

$$\text{Log } Q = b_0 + \text{bilog}x_1 + b_{2\log}x_2 + b_{3\log}x_3 + b_{4\log}x_4 + b_{5\log}x_5 + b_{6\log}x_6 + b_{7\log}x_7 + b_{8\log}x_8 + b_{9\log}x_9 + u \ldots\ldots 3.8$$

3. Double logarithmic function

$$\text{Log } Q = b_0 + \text{bilog}x_1 + b_{2\log}x_2 + b_{3\log}x_3 + b_{4\log}x_4 + b_{5\log}x_5 + b_{6\log}x_6 + b_{7\log}x_7 + b_{8\log}x_8 + b_{9\log}x_9 + u \ldots\ldots 3.9$$

4. Exponential Function

$$\text{Log } Q = b_o + b_i x_i + b_2x_2 + b_3x_3 + b_4x_4 + b_5x_5 + b_6x_6 + b_7x_7 + b_8x_8 + b_9x_9 + u \quad \ldots\ldots 3.10$$

A'priori Expectation

i) $\frac{dy}{dx_1} > 0;$ The higher the amount of loan granted, the higher is expected to be the value of the output of food crops.

ii) $\frac{dy}{dx_2} > 0;$ The larger the farm size, the higher is expected to be the value of the output of food crops.

iii) $\frac{dy}{dx_3} > 0;$ A large household size is expected to exert a positive influence on the output of the food crops.

iv) $\frac{dy}{dx_4} > 0;$ The higher the household savings invested, the higher is expected to be the value of the output of food crops.

v) $\frac{dy}{dx_5} > 0;$ Fertilizer application is expected to exert a positive influence on the output of the food crops.

vi) $\frac{dy}{dx_6} > 0;$ The higher the level of education, the higher is expected to be the value of output of food crops.

vii) $\frac{dy}{dx_7} > 0;$ Farming experience is expected to exert a positive influence on the value of output of food crops.

viii) $\frac{dy}{dx_8} > 0$; The more the number of adult members of a household, the higher is expected to be the output of food crops.

Objective 6

This objective has two segments; repayment performance and repayment determinants. Multiple regression analysis is used to analyze the repayment determinants of BOA food crop farmer loan beneficiaries. The choice of this technique was informed by Adegbite (2009) study on Repayment Performance of Beneficiaries of Ogun State Agricultural and Multi-purpose Credit Agency (OSAMCA) in Ogun State Nigeria and Okerenta (2005) study on Evaluation of the Performance of Microfinance Programmes in the Niger Delta Region of Nigeria. Descriptive tool is used to analyze the repayment performance of food crop farmer loan beneficiaries in Kogi State Nigeria. The repayment performance was calculated using the formula;

$$Repayment\ Performance\ (\%) = \frac{Total\ amount\ of\ loan\ repaid}{Total\ amount\ of\ loan\ granted} \times \frac{100}{1} \quad \text{.....3.11Wh}$$

ile

$$Default\ Rate(\%) = \frac{Outstanding\ Credit\ Balance\ to\ be\ paid}{Total\ amount\ of\ loan\ granted} \times \frac{100}{1} \quad \text{.....3.12}$$

In the analysis of Repayment Performance, four functional forms were treated. They are linear, semi- logarithmic, double logarithmic and exponential. The form that gives the best fit among the four functions based on statistical and econometric criteria was finally used for the analysis. The general form of the model for analyzing the repayment determinants is.

LRD = f (x_1, x_2, x_3, x_4, x_5, x_6, x_7, x_8, x_9, u) 3.13

Where

LRD = Amount of loan repaid (₦)

x_1 = Amount of loan granted (₦)

x_2 = Amount of loan applied for (₦)

x_3 = Amount of interest paid (₦)

x_4 = Farm size (hectares)

x_5 = Household size (No. of persons)

x_6 = Level of education of respondents (Years in School)

x_7 = Farming experience (Years)

x_8 = Age of respondent (Years)

x_9 = Gender of the respondent (Dummy Variable)

Male = 1, Female = 0

u = Error term.

The functional form of the equation is explicitly expressed as:

1. Linear function

$$LRD = b_o + b_i x_i + b_2x_2 + b_3x_3 + b_4x_4 + b_5x_5 + b_6x_6 + b_7x_7 + b_8x_8 + b_9x_9 + U \quad \ldots 3.14$$

2. Semi – logarithmic function

$$LRC = b_0 + bilogx_1 + b_{2log}x_2 + b_{3log}x_3 + b_{4log}x_4 + b_{5log}x_5 + b_{6log}x_6 + b_{7log}x_7 + b_{8log}x_8 + b_9x_9 + u \quad \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots 3.15$$

3. Double logarithmic

$$Log\ LRD = b_0 + bilogx_1 + b_{2log}x_2 + b_{3log}x_3 + b_{4log}x_4 + b_{5log}x_5 + b_{6log}x_6 + b_{7log}x_7 + b_{8log}x_8 + b_9x_9 + u \quad \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots 3.16$$

4. Exponential Function

$$Log\ LRD = b_o + b_i x_i + b_2x_2 + b_3x_3 + b_4x_4 + b_5x_5 + b_6x_6 + b_7x_7 + b_8x_8 + b_9x_9 + u \quad \ldots 3.17$$

A'priori Expectations

i) $\frac{dy}{dx_1} > 0;$ The higher the amount of loan granted, the higher is expected to be the amount of loan that is likely to be repaid.

ii) $\frac{dy}{dx_2} > 0;$ The higher the amount of loan applied for, the higher is expected to be the amount of loan that is likely to be repaid.

iii) $\frac{dy}{dx_3} < 0;$ The higher the amount of interest paid, the lower is expected to be the amount of loan that is likely to be repaid.

iv) $\frac{dy}{dx_4} > 0;$ A large farm size is expected to exert a positive influence on the amount of loan repaid.

v) $\frac{dy}{dx_5} > 0;$ A large household size is expected to exert a positive influence on the amount of loan repaid.

vi) $\frac{dy}{dx_6} > 0;$ The higher the level of education, the higher is expected to be the amount of loan that is likely to be repaid.

vii) $\frac{dy}{dx_7} > 0;$ Farming experiences is expected to exert a positive influence on the amount of loan repaid.

viii) $\frac{dy}{dx_8} > 0$; The more the number of adult members of a household, the higher is expected to be the amount of loan repaid.

ix) $\frac{dy}{dx_9} > 0$; Male members of the household are expected to contribute more to loan repayment than the female.

Objective 7

Likert scale of analysis was used to achieve the major constraints hampering the effective functioning of the BOA in the state. This is informed by Okerenta (2005). This is analyzed using the mean score method. The mean response to each constraint was calculated using the formula:

$$\bar{X} = \frac{\sum F_i(A_i)}{N} \quad \ldots\ldots\ldots\ldots\ldots\ldots 3.18$$

Where;

$\bar{X}$ = means response

$\sum$ = summation sign.

F_i = number of respondents choosing a particular scale point

A_i = numerical scale of the scale point.

N = sample size.

The mean response to each constraint was interpreted using the concept of real limits of numbers. The numerical value of the scale points (response mode) and their respective real limits are as follows:

Strongly agree = 5 points with real limits of 4.50 – 5.49

Agree = 4 points with real limits of 3.50 – 4.49

Undecided = 3 points with real limits of 2.50 – 3.49

Disagree = 2 points with real limits of 1.50 – 2.49

Strongly disagree = 1point with real limits of 0.5 – 1.49

Also the pooled percentages were used to achieve the possible strategies for a sustainable and successful BOA service delivery to the farmers in the state. These were calculated using the formula:

$$PP = = \frac{\sum F_i(A_i)}{N(5-1)} - N \times \frac{100\%}{1} \quad \ldots\ldots\ldots\ldots\ldots\ldots 3.19$$

Where;

PP= pooled percentage

∑ = summation sign.

F_i = number of respondents choosing a particular scale point.

A_i = numerical scale of the scale point.

N = sample size.

3.4.1 Testing of Hypotheses

In order to empirically assess whether or not the performance of BOA have any significant effect in enhancing food crop production in Kogi State, Nigeria, the following hypotheses were postulated, and were empirically tested.

Hypothesis One

Agricultural financing through BOA has no significant effect on food crop (Yam, Cassava, Maize and Sorghum) production in Kogi State, Nigeria. In this case loan beneficiaries and non-loan beneficiaries output were computed and compared.

This was tested using Z – test. The Z – statistics is adopted because the sample size is more than 30 and it is mathematically specified as:

$$Z = \frac{\overline{X}_1 - \overline{X}_2}{\sqrt{\frac{\sigma_1^2}{n_1} + \frac{\sigma_2^2}{n_2}}} \quad \textbf{……3.20}$$

Where

Z = The value by which the statistical significance of the mean difference would be judged.

$\overline{X}_1$ = Mean value of output after the disbursement of loan by BOA to the food crop farmers

$\overline{X}_2$ = Mean value of output of the farmers without loans

σ_1^2 = Standard deviation value of output after loan disbursement to the beneficiaries.

σ_2^2 = Standard deviation value of output of the non-loan beneficiaries.

n_1 = Sample size of BOA loan beneficiaries.

n_2 = Sample size of non-loan beneficiaries.

Hypothesis Two

There is no significant difference between the amount of loan obtained by the food crop farmers and the amount demanded by them from the BOA in the State. This is tested using Z –test. The Z – statistics is adopted because the sample size is more than 30 and it is mathematically specified as

$$Z = \frac{\overline{X}_1 - \overline{X}_2}{\sqrt{\frac{\sigma_1^2}{n_1} + \frac{\sigma_2^2}{n_2}}} \quad \textbf{.....3.21}$$

Where

Z = The value which the statistical significance of the mean will be judged

$\overline{X}_1$ = Mean value of the amount of loan obtained

$\overline{X}_2$ = Mean value of the amount of loan demanded

σ_1^2 = Standard deviation value of the amount of loan obtained

σ_2^2 = Standard deviation value of the amount of loan demanded

n_1 = Sample size of the loan obtained

n_2 = Sample size of the loan demanded

CHAPTER FOUR

4.0 RESULTS AND DISCUSSION

4.1 Socio- Economic Characteristics of Food Crop farmer-Loan Beneficiaries and Non-Loan Beneficiaries of BOA in Kogi State.

The objective here is to identify the socio-economic characteristics of food crop farmer loan beneficiaries of BOA in Kogi State as well as the non-loan beneficiaries and to determine their influence on the patronage level of the BOA programmes.

4.1.1 Gender of Food Crop Farmers Loan and Non-loan Beneficiaries of BOA

The Gender of the food Crop Farmers were studied based on male and female. This is as shown on table 4.1

Table 4.1 Distribution of Respondents According to Gender

Respondents	Frequencies of Loan Beneficiaries	Percentage (%)	Frequencies of Non Loan Beneficiaries	Percentage (%)
Male	142	78.89	101	56.11
Female	38	21.11	79	43.89
Total	180	100	180	100

Source: Field Survey data, 2011

Table 4.1 shows that out of the 180 loan beneficiaries, 78.89% of them were males while 21.11% were females. Out of the 180 non-loan beneficiaries 56.11% were males while 43.89% were females. This shows that more males are involved in farming activities in the state than the females. This confirm the notion that males are bread winners of the family and are saddled with responsibility of putting food on the table and providing for the other needs of the family. Comparing the percentage of the male loan beneficiaries to that of the non-loan beneficiaries, it is shown that more males are favoured in the granting of loan by the BOA. The percentage of male loan beneficiaries is 78.89% while non beneficiaries is 56.11%. This is consistent with the findings of Adegbite (2009) and

Olujide (2008) who observed that 72.5% and 79.2% of males respectively were favoured in the granting of agricultural loan. This is because the males are perceived to be more involved in farming activities than the females. It goes to confirm that even the BOA recognized the position of the male in farming activities in the state. This position approximates Williams (2007) and Akanni (2007) who asserted that since the male holds title to farm land it is therefore easy for them to present it as collateral for the sake of loan acquisition and hence the high percentage of male favoured in the granting of loan by financial institutions.

4.1.2 Educational Qualification of Food Crop Farmers Loan and Non-Loan Beneficiaries of BOA.

The educational qualifications of farmers were studied based on the classification of no formal education, primary, secondary and higher education. This is as shown in Table 4.2.

Table 4.2: Distribution of Respondents According to their Educational Qualifications

Level of Education	Frequency of Loan Beneficiaries	Percentage (%)	Frequency of non loan Beneficiaries	Percentage (%)
No formal education	5	2.78	119	66.11
Primary	50	27.78	33	18.33
Secondary	66	36.67	16	8.89
Higher education	69	32.78	12	6.67
Total	180	100	180	100

Source: Field survey, 2011

Table 4.2 shows that one hundred and seventy five (175) respondents representing 97.22% of the loan beneficiaries had one form of formal education or the other while five (5) respondents representing 2.78% of the loan beneficiaries had no formal education. Fifty nine (59) respondents representing 33.89% of non loan beneficiaries had one form of formal education or the other while one hundred and nineteen (119) representing 66.11% of non loan

beneficiaries had no formal education. This conforms to the findings of Adeolu and Taiwo (2004) who observed that 4.06% of Microfinance beneficiaries had no formal education. This implies that educational qualification play a part in obtaining loan from the BOA in the state as the percentage of respondents without formal education among the loan Beneficiaries was 2.78% compared to the 66.11% of non-loan beneficiaries. This implies that majority of the respondents of the non-loan beneficiaries have low literacy level which can affect their ability to manage the loan and put it into productive use and hence the high percentage of educated loan beneficiaries.

4.1.3 Farming Experience of Food Crop Farmers Loan and Non-Loan Beneficiaries of BOA.

The respondents farming experience was measured by the number of years they have engaged in farming activities and the results are shown in Table 4.3.

Table 4.3 Distribution of Respondents According to Farming Experience

No of years	Frequency of loan beneficiaries	Percentage (%)	Frequency of Non-loan Beneficiaries	Percentage (%)
1- 5	11	6.11	2	1.11
6-10	19	10.56	4	2.22
11-15	52	28.89	28	15.56
16-20	46	25.56	40	22.22
21-50	52	28.89	106	58.89
Total	180	100.00	180	100.00

Mean Years of experience = Loan Beneficiaries - 18.03 years.

= Non Loan Beneficiaries – 18.79 years

Source: Field Survey, 2011.

The mean years of farming experience following from Table 4.3 was about 18 years for both loan and non loan beneficiaries. This is an indication that most of the food crop farmers (respondents) have engaged in farming activities long enough and could be assumed to have acquired sufficient skills for effective farming activities. The acquired skills and expertise is likely to have a positive influence on the amount of loan received from the BOA as it is assumed that they have the required

managerial skill which will also influence to a greater extent their ability to put the loan acquired to productive use. This finding is consistent with Akanni (2007) who observed that about 70% of farmers experiences were between 16 – 25 years. Expectedly, the more the number of years of experiences in farming, the better the ability to manage the farm business well. Akanni`s (2007) position approximates the findings of Adeolu and Taiwo (2004) who observed that about 68% of farmers fall within 16years and above in farming experience. As Imran, Hulme and Rutherfood, (2002) rightly noted, the higher the experience of a business man, the higher the ability to put micro – credit into productive use.

4.1.4: Age Distribution of Food Crop Farmers Loan and Non-Loan Beneficiaries of BOA.

The respondents' ages were measured by their number of years and the results are shown in Table 4.4.

Table 4.4 Distribution of Respondents According to Age

Range of years	Frequency of Loan Beneficiaries	Percentage (%)	Frequency of non loan Beneficiaries	Percentage (%)
1 – 20	3	1.67	3	1.67
21 – 30	18	10.00	29	16.11
31 – 40	50	27.78	39	21.67
41 – 50	70	38.89	72	40.00
51 – 60	31	17.22	30	16.66
61 – 80	8	4.44	7	3.89
Total	180	100	180	100.00

Mean age of Respondents = Loan Beneficiaries = 47.78

= Non Loan Beneficiaries = 46.94

Sources: Field survey 2011

The agility of man which to a large extent determines his ability to exert energy in executing duties that require physical labour and also to manage stress decline as the man grows older. On the other hand, it is also assumed that experience is built as man grows older. These assumptions premise our analysis on the data collected on the age of the food crop

farmers in Kogi state as a socio-economic characteristic that may influence the farmers' patronage of the BOA programmes. Table 4.4 shows that one sixty nine (169) respondents representing 93.88% of the loan beneficiaries are between the ages of 21 – 60 while one hundred and seventy (170) respondents representing 94.43% of non loan beneficiaries are between the ages of 21 – 60. The mean age of the sampled food crop farmers' loan beneficiaries is 47.78 years and that of the non loan beneficiaries is 46.94. This follows that majority of the food crop farmers in Kogi state are those in the productive age. This implies that the farmers are matured and are likely to concentrate on the farming activities which can influence positively their patronage of BOA programmes. This is consistent with the findings of Henri-Ukoha, et.al (2011) that posited that about 62% of farmers fall between 25 and 54 years of age and are relatively young and within the productive age. Chikezie, et.al (2011) also observed that the farmers mean age fell within the productive age range of 40 – 54. This implies that the sampled farmers are within the active working age bracket and could put the loan into productive use.

4.1.5: Major Occupation of Food Crop Farmers Loan Beneficiaries and Non-Loan Beneficiaries of BOA.

The food crop farmers were studied and identified on the basis of their major occupation. The result is hereby presented in Table 4.5

Table 4.5: Distribution of Respondents According to their Major Occupation

Occupation	Frequency of Loan Beneficiaries	Percentage (%)	Frequency of non-loan Beneficiaries	Percentage (%)
Farming	102	56.67	157	87.22
Teaching	41	22.78	9	5.00
Civil Servant	29	16.11	5	2.78
Others	9	5.00	8	4.44
Total	180	100.00	180	100.00

Source: Field survey 2011

Following from table 4.5, one hundred and two (102) respondents representing 56.67% of loan beneficiaries have farming as their major

occupation while it is 87.22% for the non – loan beneficiaries. Seventy nine (79) respondents representing 43.33% of loan beneficiaries were minor farmers while twenty two (22) respondents representing 12.78% of non beneficiaries were minor farmers. This is consistent with the findings of Adegbite (2009) who observed that majority of the respondents are major farmers though they handle other minor jobs to supplement their income – This is contrary to the findings of Olujide (2008) who opined that only 33.0% of his respondents had farming as a major occupation. The implication of the result presented above is that majority of the food crop farmers loan beneficiaries as well as the non-loan beneficiaries are engaged in farming as their major occupation. This would exert a positive influence on their patronage of BOA programmes since BOA is a specialized bank for Agricultural Development in Nigeria.

4.1.6: Household Size of Food Crop Farmers Loan and Non-Loan Beneficiaries of BOA.

The household size of respondents were measured based on the number of persons per household and the results is presented on Table 4.6.

Table 4.6: Distribution of Respondents According to their Household Size

Household size Range	Frequency of Loan Beneficiaries	Percentage (%)	Frequency of non-loan Beneficiaries	Percentage (%)
1-5	88	48.89	99	55.00
6-10	67	37.22	58	32.22
11-15	19	10.56	22	12.22
16 – 20	6	3.33	1	0.56
Total	180	100.00	180	100.00

Mean household size = Loan Beneficiaries = 8.42

= Non Loan Beneficiaries = 7.92

Source: Field Survey 2011

Table 4.6 shows that one hundred and fifty five (155) respondents representing 86.11% of the loan beneficiaries had a household size of between 1 – 10, while twenty five (25) respondents representing 13.89% had a household size of 11 and above. One hundred and fifty seven (157) respondents representing 87.22% of the non loan beneficiaries had household size of between 1 – 10, while twenty three (23) respondent

representing 12.78% had household size of 11 and above. The mean household size was about 8persons per household for both loan and non loan beneficiaries. This large family size will likely provide the household head with a very cheap labour source and may influence the BOA positively in the granting of loan to the household. On the other hand, a large household size could lead to spending more on non farming activities such as payment of hospital bills; children school fees, feeding, and clothing. Increased spending on non business activities may therefore influence negatively the farmers patronage of the BOA programmes, as loan granted may not be paid back due to huge non farming expenses. The implication of this is that, farmers will have to make do with little savings as investment in the farming activities. This is in agreement with the findings of Orebiyi, et.al (2011) who observed in their study on Demand for Institutional credit that the mean household size of the farmers was 6. The implication is that farmers spend a modest amount on feeding, clothing, children's school fees and hospital bills. Eze, et.al (2011) findings show that the mean household size of farmers was 7 persons and they observed that the large family size will serve as free and cheap labour to the farming household. They stressed further that, though this helps to increase productivity, but a substantial

quantity of the output will be used in household consumption and maintenance.

4.1.7 Annual Household Income of Food Crop Farmers Loan and Non-Loan Beneficiaries of BOA.

The annual household income of respondents were measured based on the total amount of income earned by the household within a year and the results is presented in Table 4.7.

Table 4.7: Distribution of Respondents According to their Annual Income

Annual Income Range	Frequency of Loan Beneficiaries	Percentage (%)	Frequency of Non-loan Beneficiaries	Percentage (%)
₦1,000 –₦100,000	102	56.67	94	52.22
₦101,000 -₦200,000	33	18.33	35	19.44
₦201,000 – ₦300,000	21	11.67	30	16.67
₦301,000 –₦ 400,000	12	6.67	14	7.78
₦401,000 –₦ 500,000	6	3.33	4	2.22
₦501,000 - ₦600,000	6	3.33	3	1.67
Total	180	100.00	180	100.00

Source: Field Survey Data 2011

Table 4.7 shows that one hundred and thirty five (135) respondents representing 75% of the loan beneficiaries earned between 1,000 – 200,000 annually while one hundred and twenty nine (129) respondents representing 71.66% of the non loan beneficiaries earn between 1,000 – 200,000 annually. The annual mean income for loan beneficiaries was

found to be ₦92, 667 and that of the non loan beneficiaries was found to be ₦94,333. These can be classified as “low income” when compared with the minimum wage of ₦18,200 per month. Annual household income has positive and negative impact on farming activities. The higher the level of income of farmers, the higher will be their personal savings which will be invested in farming. Personal savings exert positive influence on the amount of loan granted by the BOA. The implication of the annual income here is that, farmers will have less money from their personal savings that can be invested into the farming business. Also, low savings of the farmers will influence their patronage of BOA programmes. This is consistent with the findings of Okerenta (2005) in his study on microfinance in Nigeria that the annual mean income of his respondents was N55, 000 which can be classified as very low income. Adofu, et.al (2010) also observed that low income for the small scale farmers affect their ability to embrace innovations and technological changes.

4.1.8 Farm Size of Food Crop Farmers Loan and Non-Loan Beneficiaries of BOA.

The farm size of respondents were measured based on the numbers of hectares of land held by each farmer for farming activities. The results is

presented in Table 4.8.

Table 4.8: Distribution of Respondents According to their Farm Size

Farm Size	Frequency of Loan Beneficiaries	Percentage (%)	Frequency of Non-loan Beneficiaries	Percentage (%)
0 - 2.0	130	72.22	124	68.89
2.0- 4.9	43	23.89	46	25.56
5.0- 7.9	07	3.89	10	5.56
Total	180	100.00	180	100.00

Mean Farm Size: Loan Beneficiaries = 2.92 ha
: Non Loan Beneficiaries = 3.07 ha
Source: Computed From Field Survey Data 2011

Table 4.8 shows that one hundred and thirty (130) respondents representing 72.22% of the loan beneficiaries operated less than 2.0 hectares of land while one hundred and twenty four (124) respondents representing 68.89 of non loan beneficiaries operated less than 2.0 hectares of land. Seven (7) respondents representing 10% of loan beneficiaries owned farms in the range of between 5.0 – 7.9 hectares of land. The mean farm size was found to be 2.92 hectares of land for loan beneficiaries and 3.07 hectares of land for non loan beneficiaries. The

implication of this mean farm size is that the sampled loan and non loan beneficiaries of BOA operated small farm size. The dominance of small scale farmers in the study area may not be unconnected with tenurial problems. This is consistent with the findings of Afolabi, (2010) that small scale farmers were classified to have a land holding of 0.1 – 5.99 hectares of land and they constituted 80.78% of all farm holdings, the medium scale farmers range from 6.0 – 9.99 hectares and constituted 13.59% of all farm holdings while larger farms range from 10.0 hectares and above and constituted 5.63% of all farm holdings. The reason for the small scale land holdings, according to Afolabi, (2010), was not unconnected to the land tenure system which support fragmented land holdings.

4.2 Organization and Functioning of the BOA

The organogram of BAO is presented below in figure 1 to show the organizational structure of the BOA.

Following from figure 4.1 the principal officers of the bank consist of appointed Board of Directors and the Management staff. The board of directors is made up of the chairman, Managing Director, the Executive Directors and Directors.

This board is the policy making body of the Bank. The managing Director who is also the Chief Executive Officer of the bank is also the chief adviser to the Board in all matters pertaining to management of the Bank. Directly under the Managing Director are Executive Directors who assist in matters of branch management, corporate services, business development and finance and accounts. The managing Director is also responsible for the coordination of various technical divisions such as corporate planning, legal services, inspection and the implementation of policies with regard to effective management of banking services to the Nigerian farmers and cooperative societies. The coordination of the banking services at the zonal level is the responsibility of the controllers. They are directly responsible to the chief executive officer. Their major responsibility is to translate the banks policies and programmes to the branch heads at the state levels. At the state level, the branch heads are responsible to the zonal controllers from whom they receive directives, for all technical, administrative and personnel matters in each zone.

Directly under the branch heads are the heads of credit and operations. The branch heads together with the heads of credit and operations are responsible for the day-to-day running of the bank in each

state. The heads of operations coordinate the activities of cash centers and the heads of credit coordinate the activities of the loan recovery centers in the various agricultural zones and at the local government level of the states.

At the branch offices are staff of the bank including the investment officers, monitoring, and evaluation and appraisal staff, accounting officers, secretary to the branch heads, typists, messengers and security staff who are directly responsible to the branch heads. These staff assist the customers who call at the branch offices for various routine transactions (NACRDB, 2010)

4.2a Organization of BOA

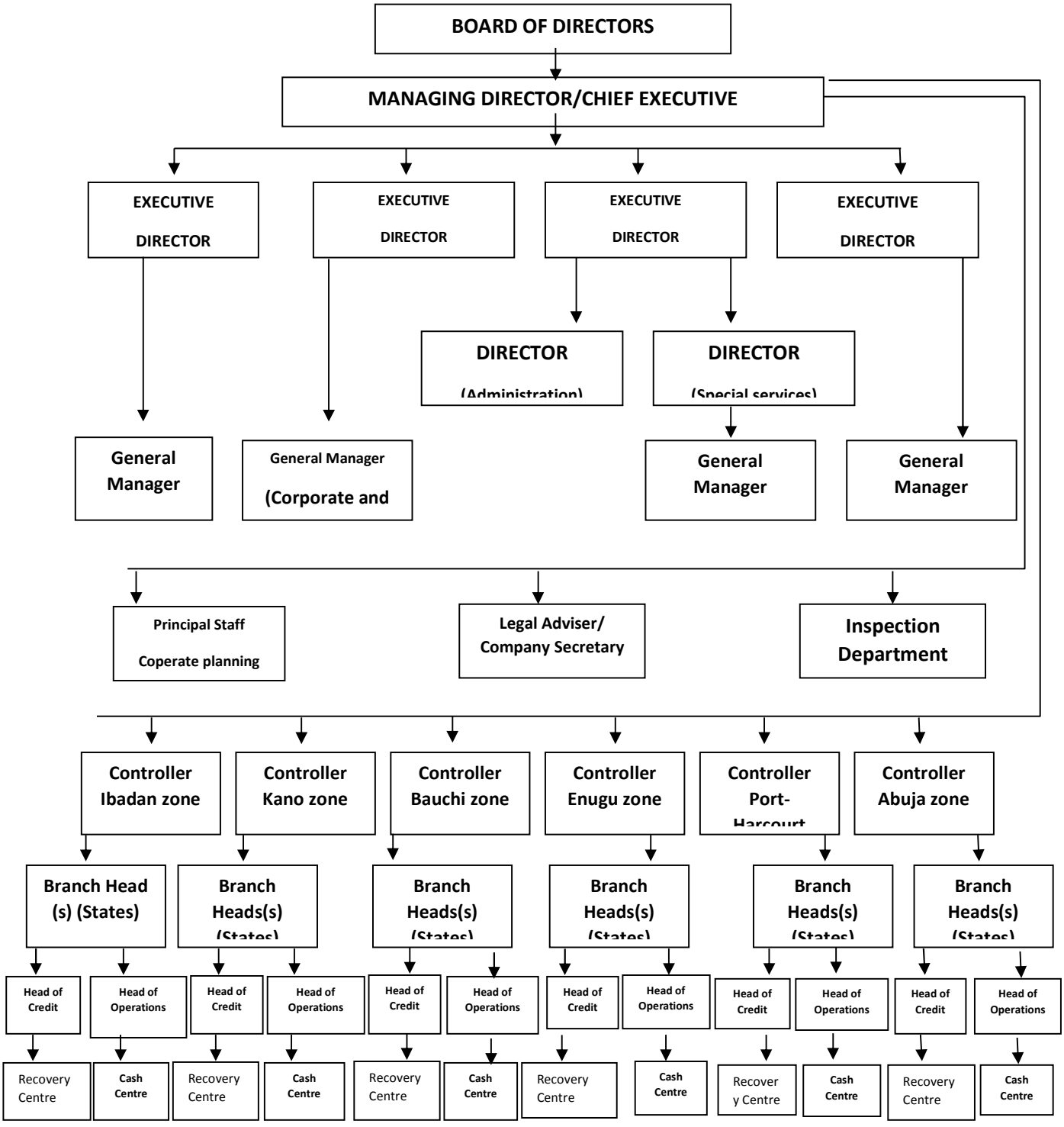

FIGURE4.1: ORGANOGRAM OF BANK OF AGRICULTURE (BOA)

Source: BOA, 2010.

The Bank of Agriculture (BOA) started with the name, Nigerian Agricultural Bank (NAB), in 1973. It was renamed in 1978 as Nigerian Agricultural and Cooperative Bank (NACB). With the merger with the Peoples Bank and Family Economic Advancement Programme (FEAP), it became Nigerian Agricultural Cooperative and Rural Development Bank (NACRDB) in 2001. In 2010, it was renamed once again to Bank of Agriculture (BOA). The bank serves the nation through a four- tier structure at the apex of which is the head office in Kaduna State. Under the head office, there are six Zonal Offices in Abuja (North Central), Bauchi (North East), Enugu (South East), Port Harcourt (South - South), Ibadan (South West) and Kano (North West) which coordinate 198 representative offices. The implication of this is that the scanty spread of the Bank and its location in urban and semi-urban areas will affect its function as an agricultural finance institution since most of the farmers are in the rural areas.

Table:4.9 BOA Zonal Offices and Their Number of Branches

S/N	Zones/States	Number of Branches
1	The North Central Zone	
	Benue	6
	Federal Capital Territory	3
	Kogi	6
	Kwara	7
	Nassarawa	5
	Niger	8
	Plateau	7
	Total Number of Branches	**42**
S/N	**Zones/States**	**Number of Branches**
2	North East Zone	
	Adamawa	7
	Bauchi	5
	Borno	5
	Gombe	4
	Taraba	4
	Yobe	6
	Total Number of Branches	**31**
S/N	**Zones/States**	**Number of Branches**
3	North West Zone	
	Jigawa	5
	Kaduna	7
	Kano	7
	Katsina	6
	Kebbi	5
	Sokoto	3
	Zamfara	3
	Total Number of Branches	**36**
S/N	**Zones/States**	**Number of Branches**
4	South East Zone	
	Abia	5
	Anambra	6

	Ebonyi	5
	Enugu	4
	Imo	6
	Total Number of Branches	**26**
S/N	**Zones/States**	**Number of Branches**
5	South-South Zone	
	Akwa Ibom	5
	Bayelsa	2
	Cross River	4
	Delta	4
	Edo	5
	River	4
	Total Number of Branches	**24**
S/N	**Zones/States**	**Number of Branches**
6	South-West Zone	
	Ekiti	5
	Lagos	8
	Ogun	8
	Ondo	5
	Osun	6
	Oyo	7
	Total Number of Branches	**39**

Source: NACRDB, 2010.

4.2b. Functioning of BOA

The Bank of Agriculture was principally set up to provide loans for farmers. Its other functions include:

1. Promotion of improved productivity and aggregate food production in farm sector.

2. Provide necessary support for government effort aimed at diversifying the productive base of the economy through design and promotion of agro-base non-oil export programmes.
3. To address the immense distortions in the domestic agricultural purchase/marketing system following the dissolution of the agricultural commodity board.
4. To provide and design effective policies towards the provision of agricultural credit to farmers at concessionary interest rate.
5. To provide succor to retrenched workers in both private and public sector through the credit it offers for agro-allied products and marketing.
6. To finance direct investment in equity capital base of major agro-allied industry ventures and to provide requisite guarantee to enable them source external funds at both domestic and international markets. (NACRDB, 2010).

4.3 Products and Services of BOA

The products and services of the bank include the various schemes programmed and activities carried out in order to fulfill their mandate, role and obligation to the agricultural sector generally and the small scale

farmers in particular throughout the country as their major source of credit provider as well as their guaranteeing institution.

The schemes include the following:

a) On Lending Scheme

Under this scheme, lending is made to establish institutions against repayment guarantee for on- lending in small scale farming. These established institutions are: State Government, Cooperative Societies, State Agriculture Credit Co operations, River Basin Development Authorities and Federal Government Agencies.

b) Direct Lending Scheme

As the name implies the scheme deals directly with the beneficiaries without having to go through the on-lending institutions. The farmers can apply for loan directly to BOA without passing through any institutional arrangement. Securities like certificate of occupancy are required for direct lending scheme.

c) Small Holder Loan Scheme

This scheme is designed to reach small farmers directly. This is meant to meet the increasing credit demand of small scale farmers who produce the bulk of the food requirement of the population. The security requirement in direct lending like certificate of occupancy and others are not obtainable in this scheme. The security is to guarantors and ability to certify the farmers in question own the farm land and that he resides in the village where the farm land is located

d) Special Small Holder Loan Scheme

This is a special on-lending scheme designed to reach small scale farmers. The disbursement of the special on-lending scheme is supervised by the state ministry of agriculture and directly controlled by the state governor. Under this scheme, no further loan will be made to the state government unless the premium of the previous one is fully repaid. The term of loan is one year.

e) Group Lending Scheme

This is a relatively newer scheme initiated by BOA in order to further extend credit to increase the number of farmers at premium cost. This

scheme for small scale farmers is called “the self – help group linkage programme”. This makes it possible for informal farmers group or association nationwide to have access to bank credit facilities for the benefit of individual members. The association or group shall not be more than 25 farmers (members) classified as a “self help group” (SHG). The group is engaged in maintaining a regular savings account with a commercial bank. When such group does exist, the BOA under the scheme goes into the tripartite agreement to be executed by it, the commercial bank and the S.H.G.

After 12 months, when the farmers group would have made enough savings, BOA “Agricultural Credit Assistant” (AGCA) who would have been monitoring the activities of the S.H.G will recommend it for credit to be processed by the nearest branch office to the group’s location. The ratio of loans to savings under these programmes is 2:1

f) Workers Loan Scheme

The bank also creates an avenue for workers to earn extra income to enable them contribute to national development and food security. The only security required is a guarantor whose reputation is high.

g) Marketing Loans Scheme

This scheme is introduced to ameliorate the problems pose to small scale farmers by poor transportation network and inadequate marketing facilities. The bank embark on the granting of loans to clients to enable them purchase excess crop during harvesting seasons, store them under effective system and marketing them at the time of dearth. The aim is to eliminate wastage and to serve as an incentive towards encouraging farmers to produce more. The security requirement is 2 guarantors.

h) Livestock Credit Scheme

This scheme was created in order to implement the credit component of second livestock development projects (SLDP), a world bank assisted programme of BOA. Under this scheme, a Department was created by the BOA and the scheme was jointly implemented by the branches.

i) Agricultural Insurance Scheme

This scheme is carried out by BOA together with the Nigerian Agricultural Insurance Company (NAIC). Bank of Agriculture (BOA) has

percentage contribution and some insurance companies own part of it. Insurance forms are issued to loan applicants before the loan is granted to them.

j) Farmers Unit Trust Fund

This scheme is presently being promoted by BOA and the council of Nigeria farmers because of the urgent need to encourage small operators to pool resources together for the realization of farming objectives. The fund pooled together is administered by a trustee manager.

k) Special Project Scheme

These are loan packages run by BOA on small scale farmers with fund from international lending agencies. The funds are tied to special projects. These include ECOWAS fund and IFRD/UNDP loan programmes for women.

4.3i: **Assessment of the Food Crop Farmers Benefits of the Products and Services of BOA in Kogi State.**

The food crop farmers benefits of the products and services was studied on the basis of how many of the food crop farmers loan beneficiaries that has benefited from each of the products and services provided by BOA. The results is hereby presented in Table 4.10.

Table 4.10: Distribution of Respondents According to the Product and Services they have benefited from.

S/No	Products and Services	Total Number or Respondents	Frequency of Respondents	Percentage %
1	On lending scheme	180	22	12.22
2	Direct lending scheme	180	180	100.00
3	Small holder loan scheme	180	163	90.56
4	Special small holder loan scheme	180	99	55.00
5	Group lending scheme	180	134	74.44
6	Workers loan scheme	180	93	51.67
7	Marketing loan scheme	180	17	9.44
8	Livestock credit scheme	180	47	26.11
9	Agricultural insurance scheme	180	24	13.33

10	Farmers unit Trust Fund	180	02	1.11
11	Special project scheme	180	07	3.89

Source: Field survey, 2011.

Table 4.10 shows frequencies and percentages of the products and services that the loan beneficiaries has enjoyed. From the results of the findings, all the farmers loan beneficiaries has enjoyed the Direct lending scheme and thus has the highest frequency of one hundred and eighty (180) respondents representing 100.00% of the respondents. Small holder loan scheme has the second highest frequency of one hundred and sixty three (163) representing 90.56% of the respondents. This is followed closely by Group lending scheme with frequency of one hundred and thirty four (134) representing 74.44% of respondents. Farmers' unit Trust fund had the lowest frequency of two (2) respondents representing 1.11% of the respondents. In all, the respondents benefited above average from five out of the eleven products and services provided and below average in six out of the eleven products and services provided by BOA. This is consistent with the

findings of Adegbite, (2005) that majority of the farmers where un aware of most the products and services provided by BOA.

4.4 Assessing the Performance of BOA by their Funding of some Selected Food Crops and their Determinants:

4.4.1The Amount of Loan Requested and Granted by BOA to Food Crop Farmers Sampled in Kogi State.

The amount of loan requested and granted by BOA to food crop farmers in Kogi State was studied by comparing the amount of loan requested by the various enterprises studied with the amount of loan granted to them by BOA. The results are presented in Table 4.11.

Table 4.11The Total and Mean of The Amount of Loan Requested and Granted by BOA to Food Crop Farmers sampled in Kogi State.

Types of Enterprises	Amount of Loan Requested(₦)	Mean amount by Respondent(₦)	Amount of Loan Granted(₦)	Mean Amount by Respondent(₦)
Maize Farmers	16,200,350	360,007.8	10,250,300	227,784.4
Sorghum Farmers	10,300,740	228,905.3	6,200,450	137,787.8
Cassava Farmers	16,750,250	372,227.8	10,360,550	230,234.4
Yam Farmers	11,778,656	261,747.9	6,898,700	153,304.4
Total Amount/Mean Amount	55,029,986	305,722.20	33,710,000	187,277.80

Percentage of Amount of Loan Granted from the Amount of Loan Requested = 61.26%

Source: Field survey 2011

Following from Table 4.11, the total amount of loan requested was ₦55,029,996 and the total amount of loan granted is ₦33,710,000. The computed mean for the amount of loan requested per farmer beneficiary was ₦305,722.20 and that of the amount of loan granted per farmer beneficiary was ₦187,277.80. The percentage of the amount of loan

granted from the amount of loan requested was 61.26%. This shows that a larger portion of the loan requested by Food Crop Farmers in Kogi State was approved and granted to them. The percentage of 61.26% indicates that a little above average of the amount of loan requested was granted. This is consistent to the observation of Orebiyi, et.al (2011) that the mean amount of loan granted to the farmers was very close to their credit demand. As Nweze (1991) observed, for a farmer to derive benefits from any institutional credit the size of the loan is very important. When the amount granted from the loan request is above average it will be big enough to support substantial innovations on the farm.

The implication of this is that, the loan granted by BOA to food crop farmers in Kogi State will influence Food Crop production beyond the previous production. Loan granted to food crop farmers will not be 100% invested into the farming business, as some will help in taking care of some of the farmers basic needs like health, clothing, children's school fees and shelter. As Ijere (1998) rightly put it, credit constitutes the power or key to unlock latent talents, abilities, visions and opportunities which in turn act as the mover of economic development.

4.4.2: Factors Influencing the Funding of some Selected Food Crops (Yam, Cassava, Maize and Sorghum) by BOA in the State.

Table 4.12: Multiple Regression Results of the Factors influencing the amount of Loan obtained by Selected Food Crop Farmers from BOA in Kogi State.

		Linear		Semi –Log		Double-Log		Exponential	
Explanatory variable		Coefficients	t-ratios	Coefficients	t-ratios	Coefficients	t-ratios	Coefficients	t-ratios
Annual household income	(X_1)	0.086	1.863	23208.67	1.559	0.163	3.177*	4.40E – 07	2117**
Interest Rate Charged	(X_2)	0.510	1.191	14578.75	0.791	0.207	3.248*	2.84E – 06	1.475
Household Size	(X_3)	- 576.594	-0.226	2611.471	0.109	0.083	1.018	0.149	1.303
Level of Education	(X_4)	-1878.828	-1.388	-1136.330	-0.038	0.008	0.075	-0.003	-0.541
Amount of Loan Repayment	(X_5)	0.877	15.529	97505.01	4.628*	0.491	6.754*	2.90E – 06	11.408*
Farm size	(X_6)	1120.673	0.317	-2655.122	-0.130	0.045	0.636	0.034	2.157**
Borrowing frequency	(X_7)	-5152.590	-1.059	-31710.59	-1.660	-0.044	-0.665	0.527	2.409**

Farming experience	(X_8)	702.275	0.308	22465.13	0.469	0.202	1.225	0.020	1.999**
Household expenditure	(X_9)	-0.039	-0.725	-5211.330	-0.282	-0.058	-0.916	-704E – 08	-0.288
Age of respondents	(X_{10})	-2498.100	2.482**	-158088.3	2.583**	-0.893	4.226*	-0.025	-5.623*
Constant term		120582.5		-796625.9		5.266		11.575	
R^2		0.720		0.403		0.705		0.735	
F-Statistics		63.801		7.508		26.538		46.898	
N		180		180		180		180	

* Source: Computer Analysis of the Field Survey Data, 2011. * = Significant 1%, ** = Significant 5%.

The result of the multiple regression analysis of factors influencing the amount of loan obtained by the Food Crop Farmers in Kogi State from the BOA is presented in Table 4.12. The result indicates that the exponential function gave the best fit with the highest value of coefficient of multiple determination (R^2) of 0.735 and six significant variables which is the highest among the functional forms fitted into the field data. From the result of the exponential function, the coefficient of annual household income, amount of loan repaid, farm size, borrowing frequency, farming experience and age of respondents were all significant as shown in Table 4.12.

The coefficient of annual household income was significant at 5% and positive showing that the amount of loan obtained is directly related to the annual household income indicating that as the amount of loan obtained increases, annual household income increases. It should be noted that credit is not an end in its self but a means for increasing the productivity and thereby increasing the income of borrowers in this case the farmers (Agu, 1987). With increase access to credit, farmers would be able to increase their personal income from the increased productivity achieved using the loan effectively and efficiently.

The coefficient of the amount of loan repaid was significant at 1% and positive indicating that the amount of loan obtained by food crop Farmers is directly related to the amount of loan repaid, indicating that as the amount of loan obtained increases, the amount of loan repaid will also increase. As Ijere, (1998) observed, credit acts as catalyst or elixir that activates the engine of growth, enables it to mobilize its inherent potentials and to advance in the planned or expected direction. It follows therefore that the influx of credit expands income enough to cater for credit repayment.

The coefficient of farm size is significant and positive at 5% showing that the amount of loan obtained is directly related to the farm size meaning that as the amount of loan obtained increases, the farm size also increases. This is contrary to the observation of Musinguzi and Smith, (2000) that land is positively associated with the amount of crops grown. Larger farm sizes boost agricultural productivity thereby enhancing food security. Therefore, access to land via agricultural production is one of the important factors that can translate growth to poverty reduction (Chirwa, Dorward and Vigneri, 2004). As Henri-Ukoha, *et.al* (2011) observed, an

increase in farm size would result to increase in farmers loan acquisition which will invariably lead to increase in the farmers output.

The coefficient of borrowing frequency is significant and positive indicating that the amount of loan obtained is directly related to the borrowing frequency meaning that as the amount of loan obtained increases the borrowing frequency also increases. This could be due to the fact that their much experience in farming and use of credit has exposed them to the benefits of using credit (Orebiyi, et.al 2011). As Onu, Amaze and Okunmadewa (2000) findings in their study "Determinants of credit production and economic efficiency in Nigeria" shows, that gains of using credit correlates positively with experience which is achieved through frequency of usage.

The coefficient of farming experience is also significant and positive showing that the amount of loan obtained is directly related to the farming experience meaning that as the farming experience increases, the amount of loan obtained also increases. Access to market as well as orientation to produce marketable product that is earned out of experience and specialization is therefore essential for profitable utilization of credit. (Alhassan, 1998). The more the number of years of experience in farming,

the better the ability to manage the farm business well and repay loan, (Imran, Hulme and Rutherfood, 2002).

The coefficient of age of respondents is significant and negative showing that the amount of loan obtained is negatively related to the age of the respondents meaning that as the age of the respondents' increases, the amount of loan obtained decreases. This is consistent with the findings of Okerenta(2005), that as a man grow older, his agility decreases which affects farming operation and output and hence the ability to repay loan. Furthermore, as farmers are aging they are less prone to risk taking hence their borrowing propensity and utilization decreases or decline.

However, other variables which were measured but that were not significant include: interest rate charged, household size, level of education and household expenditure. This shows that these variables have no influence on the amount of loan obtained by food crop farmers in Kogi State and hence were ignored.

The coefficient of multiple determination (R^2) was 0.735. It means that annual household income, amount of loan repaid previously, farm size, borrowing frequency, farming experience and age of respondents

accounted for about 73.5% of the changes in the factors influencing the amount of loan obtained by food crop farmers in Kogi State.

The F-ratio was 46.899 which is significant at 1% implying that the joint effect of all the included variables were significant. The F tabulated is 2.51 at 1% level of significance.

4.5.1: Assessment of the factors influencing the output of Maize and Sorghum Farmers.

Table 4.13: Multiple Regression results of the Assessment of the factors influencing the output of Maize and Sorghum Farmers.

		Linear		Semi-Log		Double-Log		Exponential	
Explanatory variable		Coefficients	t-ratios	Coefficients	t-ratios	Coefficients	t-ratios	Coefficients	t-ratios
Amount of loan obtained	X_1	1.459	2.710*	34879.16	1.223	0.502	3.969*	2.19E – 05	5.862*
Farm Size	X_2	-6994.081	-0641	-12773.14	-0.273	-0.163	-0.787	-0.101	-1.335
Household Size	X_3	4469.524	1.129	4700.416	0.137944	0.014	0.095	0.028	1.052
Household savings invested	X_4	2.303	1.722	9709.993	0.307	0.350	2.494**	3.67E – 05	3.951*
Fertilizer input	X_5	-31.494	-0.196	25612.88	0.672	0.162	0.957	0.001	0.759
Level of Education	X_6	309.703	0.148	-30882.93	-0.566	-0.146	-0.604	0.014	1.025
Farming experience	X_7	2721.428	0.814	74486.29	1.042	0.331	1.043	0.024	1.049
Age of Respondents	X_8	-2181.504	-1.330	-199086.1	-1.471	-0.682	-1.136	0.008	0.720

Constant term	64937.18	185538.9	4.126	8.587
R^2	0.531	0.429	0.700	0.698
F-Statistics	5.011	1.675	13.140	23.437
N	180	180	180	180

Source: Computer Analysis of the Field Survey Data, 2011.

* = Significant at 1%, ** = Significant at 5%.

The result of the multiple regression analysis of the assessment of the factors influencing the granting of the BOA loans to the Maize and Sorghum farmers is presented in Table 4.13. The Double-Log function provided best fit with two variables significant and R^2 of 0.700. The coefficient of amount of loan obtained and household savings invested were significant as shown in Table 4.13.

The coefficient of the amount of loan obtained was significant and positive indicating that output of maize and sorghum farmers is directly related to the amount of loan obtained. This conforms to “a priori” expectation as the amount of loan increases, the output of maize and sorghum is expected to increase. This is consistent with the finding of Nwaru, (2004), that one major input necessary for the sustainable application of superior technology to agricultural production systems by resource poor farmers in a depressed economy is credit. This is because agricultural finance is the most critical of the constraints in achieving a highly productive and profitable agricultural sector, as it is vital to the development and procurement of appropriate technology, design and construction of necessary infrastructure, development and maintenance of

adequate marketing system, as well as modernization of the land tenure system (Chidebelu, 1983).

The coefficient of household savings invested was significant and positive showing that output of maize and sorghum farmers is directly related to the household savings invested into the farming business. Additional sources of funds in form of farmers' personal savings from other enterprises are required for the farmer to sustainably solidify their financial base with assumed increased output level (Akanni, 2007). This is contrary to the findings of Nwaru and Onuoha, (2010), that the rural credit structures have not been able to achieve the desired aim of allowing the farmers to employ efficient production techniques designed to raise their physical output and income.

However, other variables were measured but were not significant. These are farm size, household size, fertilizer input, level of education, farming experience and age of respondents. This means that these variables have no influence on the output of maize and sorghum farmers in Kogi State that benefitted from BOA loan and hence were ignored.

The value of the coefficient of multiple determinations (R^2) is 0.700 which implies that amount of loan obtained and household savings

invested account for 70 percent of the variations in the output of maize and sorghum farmers that benefited from BOA loan.

The F-ratio was 13.140 which is significant at 1% level showing that the joint effect of all the included variables were significant. The F tabulated is 2.51 at 1% level of significance.

4.5.2: Assessment of the factors influencing the output of Yam and Cassava Farmers.

Table 4.14: Multiple Regression results of the Assessment of the factors influencing the output of Yam and Cassava Farmers.

		Linear		Semi-Log		Double-Log		Exponential	
Explanatory variable		Coefficients	t-ratios	Coefficients	t-ratios	Coefficients	t-ratios	Coefficients	t-ratios
Amount of loan obtained	X_1	0.430	1.024	-17554.13	-0.356	0.108	0.530	5.13E – 06	2.224**
Farm Size	X_2	-16607.23	-2.211**	48319.96	0.842	0.414	1.748	-0.099	-2.384**
Household Size	X_3	8180.714	1.006	1446.818	0.027	-0.168	-0.778	0.031	0.686
Household savings invested	X_4	0.359	0.695	27614.34	0.732	0.113	0.729	1.71E – 06	0.601
Fertilizer input	X_5	52.702	0.853	33555.59	0.841	0.136	0.829	0.001	1.319
Level of Education	X_6	1937.680	0.674	110068.1	1.802	0.507	2.013	-0.018	-1.113
Farming experience	X_7	5766.994	1.131	52799.08	0.445	0.239	0.488	0.017	0.620

Age of Respondents	X_8	-963.960	-0.397	12094.69	0.080	-0.038	-0.061	-0.010	-0.719
Constant term		102489.4		-554828.0		7.023		7.876	
R^2		0.472		0.417		0.532		0.723	
F-Statistics		11.677		8.776		19.685		3.087	
N		90		90		90		90	

Source: Computer Analysis of the Field Survey Data, 2011.

* = Significant 1%, ** = Significant 5%.

The result of the multiple regression analysis of the assessment of the factors influencing the granting of BOA loans to the yam and cassava farmers is presented in Table 4.14. The exponential function provided best fit with two variables significant and R^2 of 0.723. The coefficient of amount of loan obtained and farm size were significant as shown in Table 4.14.

The coefficient of the amount of loan obtained was significant and positive meaning that output of yam and cassava farmers is directly related to the amount of loan obtained. This means that as the amount of loan obtained increases, the output of yam and cassava farmers also increases. This position agree with the "a priori" expectation that increase in the amount of loan obtained is expected to exert a positive influence on the output of yam and cassava farmers bearing in mind the important position of finance in increased productivity. This is consistent with the findings of Bravo-Uretta and Pinheiro, (1997), that there is considerable agreement with the notion that an effective economic development strategy depends critically on promoting productivity and output growth in the agricultural sector through adequate credit supply. It follows therefore that the influx of credit expands income enough to cater for credit/loan repayment since

credit act as catalyst or elixir that activate the engine of growth (Ijere, 1998).

The coefficient of farm size was significant and negative indicating that the output of yam and cassava farmers has an inverse relationship with farm size. Meaning that as farm size increases, output of farmers decreases. This opposes the “a priori” expectation as increase in farm size was expected to exert a positive influence on output of farmers. The reason for this non-conformity may be as result of the land loosing its fertility. A small fertile land may produce more than a large infertile land. Also, non use of appropriate technology and unfavourable climatic condition can have adverse effect on output. As Adegbite, (2009) noted, the larger the farm size, the higher the probability that beneficiaries will repay on schedule given the expected productivity and the level of production that could match the repayment. However, other variables were measured but were not significant. These include Household size, household savings invested, fertilizer input, level of education, farming experience and age of respondents. This means that these variables have no influence on the output of yam and cassava farmers in Kogi State that benefitted from BOA loan and hence were ignored. The value of the coefficient of multiple

determinations (R^2) is 0.723 meaning that, amount of loan obtained and farm size account for 72.3 per cent of the variations in the output of yam and cassava farmers that benefited from BOA loan. The F-ratio was 3.087 which is significant at 1% level indicating that the overall effect of all the included variables were significant.

4.6.1 Repayment performance of BOA food crop farmers loan beneficiaries in Kogi State

Table 4.15 shows the result of the repayment performance as well as the default rate of the BOA food crop (maize, sorghum, yam and cassava) farmer's loan beneficiaries in Kogi State. The Table shows that the repayment performance was 93.58%. The total amount repaid was N31, 547,300 with an outstanding balance to be settled (at the time of this study) put at N2, 162,700. The default rate was 6.42 percent.

Table 4.15: Repayment Performance of the Loan Beneficiaries of BOA among the food crop farmers in Kogi State

Enterprises	Total amount of loan granted((₦)	Total amount of loan repaid (₦)	Total outstanding balance(₦)	Repayment performance (%)	Default rate (%)
Maize Farmers	10,250,300	9,886,825	363,475	96.45	3.55
Sorghum Farmers	6,200,450	5,321,221	879,229	85.82	14.18
Cassava Farmers	10,360,550	9,923,243	437,307	95.78	4.22
Yam Farmers	6,898,700	6,416,011	482,689	93.00	7.00
Total/Repayment Performance	33,710,000	31,547,300	2,162,700	93.58	6.42

Source: Field Survey Data, 2011

This result shows reduced delinquent borrowers among the food crop farmer loan beneficiaries of BOA in Kogi State. The repayment performance of food crop farmers will influence the BOA positively to give them more access to funds thereby increasing their loan portfolios. The high repayment performance can translate into boosting agricultural output among the food crop farmers. This is because more funds will now be available to meet higher amount close to the level of credit demand of food crop farmers. Once such credit is reinvested, it will most likely repay itself, generate additional income and increase the output of food crop

farmers in Kogi State. This finding is contrary to the observation of Okorie (1985), that the agricultural sector is fraught with risk due to high loan default arising from *inter alia* government inconsistent policies in the agricultural sector, natural disaster, outbreak of disease, pest, poor management of projects, diversion of funds to other uses, poor project evaluation by banks, untimely disbursement, and outright dishonesty and fraud by loan beneficiaries. This nonconformity may be as a result of strict adherence to the laid down procedure for granting of loan by the BOA.

4.6.2 : Loan Repayment Determinants of BOA Food Crop Farmers Loan Beneficiaries

Table 4.16: Multiple Regression Result of the Determinants of Loan Repayment of Beneficiaries from BOA

		Linear		**Semi-Log**		**Double-Log**		**Exponential**	
Explanatory variable		Coefficients	t-ratios	Coefficients	t-rates	Coefficients	t-rates	Coefficients	t-rates
Amount of loan obtained	X_1	0.448	6.260*	73728.50	3.006*	0.551	6.166*	1.83E – 06	3.907*
Amount of loan requested	X_2	0.196	6.976*	94637.53	4.227*	0.012	0.147	-1.44E – 07	-0.787
Amount of Interest Paid	X_3	1.374	2.148**	43688.29	1.902	0.479	5.722*	1.56E – 05	3.721*
Farm size	X_4	9186.287	2.954*	42394.83	1.863	0.340	4.106*	0.084	4.163*
Household Size	X_5	1348.850	0.577	3004.925	0.151	-0.081	-1.120	-0.011	-0.690
Level of Education	X_6	1233.544	1.227	34418.13	1.359	0.068	0.743	0.005	0.831
Farming experience	X_7	-1181.507	-0.598	-757.87	-1.546	-0.146	-0.819	0.023	1.806

Age of Respondents	X_8	-1190.606	-1.333	-47201.95	-0.703	0.020	0.082	-0.011	-1.900
Gender of Respondents	X_9	-37262.60	2.489**	-31296.18	-1.200	-0.194	2.049**	-0.112	-1.141
Constant term		77047.02		-1972082		0.623		11.069	
R^2		0.880		0.617		0.764		0.675	
F-Statistics		138.360		19.474		39.265		39.303	
N		180		180		180		180	

Source: Computer Analysis of the Field Survey Data, 2011.

* = Significant at 1%, ** = Significan att 5%.

The result of the multiple regression analysis of loan repayment determinants of BOA food crop farmer's loan beneficiaries is presented in Table 4.16. The linear function provided best fit with five variables significant and R^2 of 0.880. The coefficient of amount of loan obtained, amount of loan requested for, amount of interest rate paid, farm size and gender of respondent were all significant as shown in Table 4.16.

The coefficient of amount of loan obtained was significant and positive showing that loan repayment is directly related to the amount of loan obtained. It follows therefore that the influx of credit expands income enough to cater for credit/loan repayment since credit act as catalyst or elixir that activate the engine of growth (Ijere, 1998). The coefficient of amount of loan requested for was significant at 1 percent and positive indicating that loan repayment is directly related to the amount of loan requested for. This is contrary to the findings of Olagunju and Adeyemo (2008), who observed low repayment performance attributable to the fact that there was lack of consistency in the growth performance of the agricultural sector in the period. The nonconformity may mean that consistency has been achieved within the period of the study.

The coefficient of amount of interest paid was significant and positive showing loan repayment is directly related to the amount of interest paid. Access to market as well as an orientation to produce marketable product is therefore essential for profitable utilization of credit and the ability to pay the price for credit (Alhassan, 1998).

The coefficient of farm size was significant and positive showing that loan repayment is directly related to farm size. A large farm size increased the probability that beneficiaries will repay loan on schedule given the expected productivity and the level of production that could match the repayment. This is consistent with the findings of Henri-Ukoha, et.al (2011) that as farm size increases farmers loan acquisition increases which invariably will lead to increase in the farmers output.

Other variables were measured but were not significant. There are Household size, level of education, farming experience and age of respondents. This means that these variables have no influence on the loan repayment of food crop farmers' loan beneficiaries of BOA and hence were ignored.

The value of the coefficient of multiple determinations (R^2) of 0.880 implies that the amount of loan obtained, amount of loan requested for,

amount of interest rate paid, farm size and gender accounts for 88 percent of the variations in the factors determining loan repayment of BOA loan beneficiaries.

The F-ratio was 138.360 which is significant at 1% level meaning that the joint effect of all the included variables were significant.

4.7.1 Major Constraints Hampering the Effective Functioning of BOA in Kogi State

Table 4.17 present mean scores for respondents rating of constraints hampering the effective functioning of BOA in Kogi State. From the result presented in Table 4.17, the most serious constraint identified is unfavourable organization policy with mean of 4.46 was ranked as the number one constraint hampering the effective functioning of BOA in Kogi State. Insufficient funding with a mean of 4.33 was ranked second. Poor group cohesiveness was ranked third with a mean of 4.28. Poor spread of network of branches with mean of 4.25 was ranked fourth. Politics in allocation of credit was ranked fifth with mean score of 4.23. Inadequate competent staff and lack of information was ranked sixth and seventh with mean of 4.11 and 3.63 respectively. The respondent agreed with items statement ranked first – seventh but disagreed with items statement ranked eight – tenth. High interest rate, misappropriation of fund and inadequate personnel training and development were ranked eighth, ninth and tenth with mean of 2.97, 2.94 and 2.67 respectively.

From the table, it is suggested that while unfavourable organization policy, insufficient finding, poor group cohesiveness, poor spread of

network of branches, politics in allocation of credit, inadequate competent staff and lack of information are seen as major constraints hampering the effective functioning of BOA in Kogi State, high interest rate, misappropriation of fund and inadequate personnel training and development were not major constraints hampering the effective functioning of BOA in Kogi State.

Table 4.17: Distribution of Respondents According to their Perception of Major Constraint Hampering the Effective Functioning of BOA in Kogi State

S/No	Problems/Constraints	Frequency of strongly agreed 5	Frequency of agree 4	Frequency of undecided 3	Frequency of disagree 2	Frequency of strongly disagree 1	Mean	Ranking	Remark
1.	Inadequate personnel training and development	40	40	0	30	70	2.67	10	Disagreement
2.	Inadequate competent staff	70	60	40	10	0	4.11	6	Agreement
3.	Poor group cohesiveness	55	55	60	10	0	4.28	3	Agreement
4.	Politics in allocation of credit	100	50	11	10	9	4.23	5	Agreement
5.	Insufficient funding	80	90	3	4	3	4.33	2	Agreement
6.	High interest rate	37	41	23	38	41	2.97	8	Disagreement
7.	Misappropriation of fund	35	42	24	35	44	2.94	9	Disagreement
8.	Unfavourable organization policy	97	73	7	1	2	4.46	1	Agreement

9.	Poor spread of network branches	80	70	0	22	8	4.25	4	Agreement
10.	Lack of information	61	47	33	23	16	3.63	7	Agreement
	Grand mean						3.79		

Source: Computed from Field Survey Data, 2011

- Any mean score $\leq$ 3.00 suggest disagreement with the item statement
- Any mean score > 3.00 suggest agreement with item statement

4.7.2 Possible Strategies for a Sustainable and Successful BOA Service Delivery to the Farmers

Table 4.18 shows means scores of possible strategies for a sustainable and successful BOA service delivering to the food crop farmers in Kogi State. From the results of the findings, majority of the respondents view all the statements as positive (favourable) strategies for a sustainable and successful BOA service delivery to food crop farmers in Kogi State. Strengthening of the group for better performance was seen by respondents as most important strategy with mean score of 81.53 per cent. Establishing mechanism to protect the farmers from undue competition for fund in BOA was ranked second with a mean score of 80.28. Establishing mechanism to check diversion of fund in BOA with a mean score of 79.86 was ranked third. The fourth ranking was, establishing mechanism for monitoring of the progress and effects of BOA service delivery to farmers, while enlightenment of farmers especially in the rural area on the products and services of BOA with a mean score of 76.81 was ranked fifth. Building political support for BOA service delivery policy with mean score of 76.39, training and re-training of BOA staff with mean score of 59.58 and motivation of staff of BOA with mean score of 58.47 were ranked sixth,

seventh and eight respectively. Privatization of BOA and BOA establishing farms instead of giving credit was ranked ninth and tenth with mean score of 19.72 and 17.08 respectively, which suggest negative strategies.

From table 4.18 all the food crop farmers' loan beneficiaries agreed that the statement ranked first to eight are positive strategies for a sustainable and successful BOA service delivery to the farmers. Item statement ranked ninth and tenth was seen as negative strategies and should be discouraged. The implication of this is that, the Government policy on privatization will not achieve result in the case of BOA, since the aim of establishing the specialized Bank was to provide loan at concessionary interest rate to farmers.

Table 4.18: Distribution of Respondents According to their Perception of Possible Strategy for a Sustainable and Successful BOA Service Delivery to the Farmers.

S/No	Possible strategy	Frequency of 0	Frequency of 25%	Frequency of 50%	Frequency of 75%	Frequency of 100%	Mean (%)	Ranking	Remark
1.	Building political support for BOA service delivery policy	6	11	27	59	77	76.39	6	Positive
2.	Establishing mechanism for monitoring of the progress and effects of BOA service delivery to farmers	0	13	28	61	78	78.33	4	Positive
3	Establishing mechanism to protect the farmers from undue competition for fund in BOA	0	11	23	63	82	80.28	2	Positive
4.	Privatization of BOA	78	63	38	1	0	19.72	9	Negative
5.	Strengthening of the group for better performance	3	14	26	67	80	81.53	1	Positive
6.	Motivation of staff of BOA	9	23	76	42	30	58.47	8	Positive
7.	Training and re-training of BOA staff	5	27	73	44	31	59.58	7	Positive
8.	Enlightenment of farmers, especially in the rural area on the products and services of BOA	0	9	31	58	77	76.81	5	Positive
	BOA establishing farms to make use of fund instead								

9.	of giving credit to farmers								
		80	77	23	0	0	17.08	10	Negative
10.	Establishing mechanism to check diversion of fund in BOA	0	7	27	70	76	79.86	3	Positive

Source: Computed from Field Survey Data, 2011

- Any mean score $\leq$ 50% suggest negative (unfavourable) strategy item statement
- Any mean score > 50% suggest positive (favourable) strategy item statement

4.8 Testing of Hypotheses

This section deals with testing the various hypotheses that have been formulated. There are two hypothesis postulated in this study. These were postulated based on the amount of loan granted to food crop farmers and loan repayment performance of the food crop farmer loan beneficiaries of BOA. The loan repayment performance was postulated to be above average i.e. H_o: P > 0.50.

4.8.1 Testing of Hypothesis One

Hypothesis One:

Agricultural financing through BOA has no significant effect on food crop (Maize, sorghum, yam and cassava) production in Kogi State, Nigeria.

Data were collected on the output of food crop farmers for both BOA loan beneficiaries and non-loan beneficiaries. The output of loan beneficiaries and money value of output of non-loan beneficiaries were measured and tested for significance. This is represented below:

Table 4.19 shows that the mean value of output after disbursement of loan is N146485.6, while that of non-loan beneficiaries stood at N153028.9. The standard deviation for loan, and non-loan beneficiaries were N146026.4 and 144256.6. The Z-test value of 4.27 is significant at

0.05 level of probability. Therefore, we reject the null hypothesis. The implication of this is that agricultural finance through BOA has significant effect on food crop (maize, sorghum, yam and cassava) production in Kogi State, Nigeria. This conform with the view of Adeolu and Taiwo, (2004), that with increase access of farmers to credit through BOA and other formal financial institutions, financial services would be available to farmers to invest in innovations and modern technology that will guarantee agricultural growth and development, and in a more restrictive sense, an increase in food crop production .

Table 4.19: Test of Significance Difference in whether Agricultural Finance through BOA has Significant effect on Food Crop Production in Kogi State Nigeria.

Category	N	Mean	SD	Z – value
Loan beneficiaries	180	146,485.60	1460264	Calculated 4.27^{S}
Non-loan beneficiaries	180	153,028.90	144256.6	Tabulated 1.96

Source: Field Survey Data, 2011. ^{S} Significant at 0.05

4.8.2 Testing of Hypothesis Two

Hypothesis Two:

There is no significant difference between the amount of loan obtained by the food crop farmers and the amount demanded by them from BOA in the state.

Data were collected on the amount of loan applied for and amount of loan granted by BOA to food crop farmer's loan beneficiaries in Kogi State Nigeria. The amount of loan request and the amount of loan granted were measured and tested for significance. This is represented as follows

Table 4.20 shows that the amount of loan obtained by food crop (maize, sorghum, yam and cassava) farmers had a mean value of N187277.80, while the amount of loan demanded had a mean value of N305722.20. The Z-test value of 33.05 is significant at 0.05 level of probability. Therefore, we reject the null hypothesis. The implication of this is that the amount of loan obtained by food crop farmer and the amount of loan demanded show differences.

Table 4.20: Test of Significance between the Amount of Loan Obtained and the Amount of Loan Demanded by Food Crop Farmers in Kogi State, Nigeria

Category	N	Mean	SD	Z
Loan demanded	180	305,722.20	419598.10	Calculated 33.05[S]
Loan obtained	180	187,277.80	225435.70	Tabulated 1.96

Source: Field Survey Data, 2011. [S] significant at 0.05

CHAPTER FIVE

5.0 SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 Summary

The main objective of this study is to evaluate the performance of Bank of Agriculture (BOA) in financing the production of food crops like yam, cassava, maize and sorghum in Kogi State, Nigeria. Other objectives includes: identifying the socio-economic characteristics of the food crop farmer – loan beneficiaries of BOA in Kogi State as well as the sampled non-beneficiaries and to see if it influences their patronage of BOA programmes, describing the organization and functioning of the BOA in the state, identifying the products and services that are provided by the BOA to food crop farmers in the state, assess the performance of BAO by comparing the funding level of some selected food crops and factors influencing them, evaluate the repayment performance and its determinants by the beneficiaries from the BOA, identify major constraints hampering the effective functioning of the BOA in the state.

Data were collected during field survey conducted in six local government area of Kogi State from May – August 2011. Purposive sampling technique was used and 360 farmers were sampled

The result suggests that BOA target more male clients because men are more actively involved in farming activities than women. Result also shows that decision making in farming activities will be above average among the loan beneficiaries, but may suffer a serious setback among non-loan beneficiaries.

The field result shows that most of the food crop farmers (respondents) have engaged in farming activities long enough and could be assumed to have acquired the necessary skills and expertise required for effective farming activities. This high experience will likely have a positive influence on the credit usage of farmers and this will lead to increased output of farmers.

The farmers are matured and are likely to concentrate on farming activities which can influence positively their patronage of BOA programmes and the output of food crop farmers. The analyzed data showed that majority of the food crop farmers are engaged in farming as their major occupation. This is supposed to exert a positive influence on their patronage of BOA programmes and hence increased output.

The research results indicated that large family size will serve as a source of cheap labour for farming activities for increased output and may influence the BOA positively in granting of loan to the farmers. On

the other hand, a large family size may lead to spending more on non-farming activities such as payment of hospital bills; children school fees, feeding, and clothing and may exert a negative influence on output and discourage BOA in extending credit facilities to farmers. The result show also that farmers will have less money from their personal savings that can be invested into the farming business and guarantee increased output.

The result shows that the loan granted by BOA to food crop farmers in Kogi State will influence the food crop output on the average percent above the previous output. But we must bear in mind that loan granted are not usually invested 100 percent into the farming as some will help in taking care of some of the farmers basic need like: health, clothing, school fees and shelter.

The result shows that annual household income, amount of loan repaid, farm size, borrowing frequency, farming experience and age of respondents were major factors influencing the amount of loan obtained by food crop farmers in Kogi State from BOA. The result shows also that there are reduced delinquent borrowers among the food crop farmer's loan beneficiaries of BOA in Kogi State.

The result shows that the amount of loan obtained, amount of loan requested for, amount of interest rate paid, farm size and gender of respondents were major determinants of loan repayment of BOA food crop farmers' loan beneficiaries. The result show also that the amount of loan obtained and household savings invested were major determinants of output of maize and sorghum farmers loan beneficiaries of BOA.

The results shows that the amount of loan obtained and farm size were major determinants of output of yam and cassava farmer loan beneficiaries of BOA. The result shows also that household size, household savings invested level of education and farming experience were major determinants of output of maize and sorghum farmer BOA non-loan beneficiaries.

The result shows that farm size and household savings invested were major determinants of output of yam and cassava BOA non-loan beneficiaries. The result shows also that the most serious constraints hampering the effective functioning of BOA is unfavourable organization policy.

5.2 Conclusion

The findings of this study showed that agricultural financing through BOA has significant effect on food crop (maize, sorghum, yam and cassava) production in Kogi State, Nigeria. This is not unconnected to the fact that with increased access to credit, farmers invested in innovations and modern technology. This is evident in the increased output of food crop farmers and their better performance over the non loan beneficiaries of BOA. Agricultural financing therefore can be seen as the most important tool for achieving agricultural growth and development. Concerted effort should be made by BOA and the government to ensure that the recommendations of this study are applied for increase performance of BOA in agricultural finance.

5.3 Policy Implications and Recommendation

The following implications are drawn and recommendations are made for a sustained and successful BOA service delivery to farmers in Kogi State and Nigeria at large from the findings of this study.

1. Formal education has been identified as one the basis for granting loan by the BOA to food crop farmers in the State. The study therefore suggest that farmers should seek formal education in order to have

access to fund which will help in procuring appropriate technology needed to transform the agricultural sector and increase productivity. Low literacy level was assumed to affect farmers' ability to manage the loan and put it to productive use.

2. The study suggests that farmers should embrace family planning with the view to controlling the number of person per household. Large family size is seen as a source of cheap labour, but it will lead to spending the loan obtained on non-farming expenses such as payment of hospital bills; children's school fees, feeding and clothing.
3. The BOA has as part of its scope mobilization of rural savings, but with the scanty network of branches and with majority of those branches in the urban and semi-urban centers, it will be difficult for the bank to achieve this position. The study therefore wishes to recommend that more branches be opened in the rural area to help achieve this, as closeness to bank will help encourage saving habit of rural farmers.
4. The BOA should make conscious effort towards increasing the level or amount of loan granted to food crop farmers in the state as credit constitutes the power or key to unlock latent talents, abilities, visions and opportunities which in turn act as the mover of economic development.

5. There is need to emphasize on the major factors that influence the amount of loan obtained which are: annual household income, amount of loan repaid previously, farm size, borrowing frequency, farming experience and age of respondents and the factors determining loan repayment which are; amount of loan obtained, amount of loan requested for, amount of interest rate paid, farm size and gender of respondent. This implies that these factors should be emphasized in designing loan programmes among the food crop farmers.
6. The strict adherence to the laid down principle of granting loan as evidence in high repayment performance of loan should be encourage to reduce delinquent borrowers.
7. The major factors that determine loan repayment which are: amount of loan obtained, amount of loan requested for, amount of interest rate paid, farm size and gender of respondent. This implies that these factors should be emphasized in designing loan programmes among the food crop farmers in other to minimize delinquency.
8. Farmers should make conscious effort to increase personal savings, as personal savings was found to be one of the major factors that influence the output of food crop farmers in the state.

9. BOA should make conscious effort towards increasing the amount of loan granted to farmers as this study has shown that the higher the amount of loan received/obtained the higher the repayment performance.
10. Lack of information, high interest rate and inadequate personnel training and development were perceived as major constraints hampering the effective functioning of BOA. There is urgent need therefore, for the government to set in motion through BOA, machineries to ensure that information about the products and programmes of BOA is well published, that the interest rate is reduced to a level that the rural farmers can accommodate and to also train the personnel of BOA for effective service delivery.
11. The government and the BOA should strategize for sustainable and successful BOA service delivery to farmers by strengthening of the group for better performance, establishing mechanism to protect farmers from undue competition for fund in BOA, establishing mechanism for monitoring of the progress and effects of BOA service delivery to farmers and enlightenment of farmers, especially in the rural area on the products and services BOA. Other recommended strategies includes:

building political support for BOA service delivery policy and motivation of staff of BOA.

REFERENCES

Adams and Von, J.D. Pischkke (1992), Micro enterprise credit Programs. Deja *World Development (20*); 1463 – 1470

Adegbite, D.A. (2009), Repayment Performance of Beneficiaries of Ogun State Agricultural and Multi-purpose Credit Agency (OSAMCA) in Ogun State Nigeria (2004 – 2005). *America – Eurasian J. Sustain. Agric* 3(1), 117 – 125.

Adegbite, D.A. (2005) "Quantitative Analysis of the major Determinant of Loan Repayment under the Nigerian Agricultural Cooperative Bank Small Holders' Loan Scheme" Ogun State Nigeria: *America Eurasian J. Sust. Agric* 2(1) 113 - 123

Adegeye, J.A and J.S. Ditto (1985), *Essential of Agricultural Economics*, Ibadan, Impact Publisher Limited: 10 – 12.

Adeolu B.A. and Taiwo A. (2004), Micro Financing as a Poverty Alleviation Measure: A Gender analysis. *Kamla –Raj J. Social Sciences* 9(2). 111 -117

Adofu I., Abula M. and Audu, S.I. (2010), An Assessment of the Effect of Interest Rate Deregulation on Agricultural Productivity in Nigeria. *Current J. of Econ Theory* 2 (2), 82 – 86.

Afolabi, J. A.(2010), Analysis of Loan Repayment among Small Scale Farmers In Oyo State, Nigeria. Kamla-Rag Journal of Social Sciences, 22(2):

115 - 119

Agu, C.C. (1987), Methods of Enhancing Efficiency in Loan Processing Evaluation and Disbursement: *Readings in Agricultural Finance. Longman Nigeria Press, 66 - 74*

Aigbokhan, B.E. (2001), Agriculture in Nigerian Economy: An Overview. Paper presented at the workshop on Planning and Management of Agricultural Sector, August 14 – 25, 2000 (Ibadan: NCEMA).

Ajakaiye, M.B. (1998), Financing Agricultural Programme in Nigeria: The Role of the Nigerian Agricultural and Cooperative Bank Limited. *Readings in Agricultural Finance.* Longman Nigeria, Press, 33

Akanni, K. A. (2007), Effect of Microfinance on Small Scale Poultry Business in South Western Nigeria. *Emir J. Food Agric*. 19 (2);38-47.

Akin-Aina, W. (1993) "Too many Cooks". *New swatch*; Special Edition, October.

Akiri E. and Adofu I. (2007), Interest Rate Deregulation and Investment In Nigeria. *Journal of Management and Social Research*. Vol.2(i);33-41.

Armah, B. and Park, T.A. (1998). "Agricultural Bank Efficiency and the Role of Managerial Risk Preference". Paper presented at the American Agricultural Economics Association Annual meeting,

August 2 – 5 Salt Lake City, Utah 1-6p.

Arene, C.J. (1992), "Loan Repayment and Technical Assistance among Small holders, Maize farmers in Nigeria" *African Review of Money, Finance and Banking* (1): 14 – 19.

Alhassan, F. (1998), Access of Rural Women to formal Credit Institutions, In Women Agricultural Intensification and Household Food Security. Being Proceedings of Seminar held at Sasakaw Centre, University of Cape Coast, Ghana.

Anyanwu, C.C. Oyefusi, A. Oaihkeam, H. Dimono, F. A. (1997), *Structure of Nigerian Economy (1960 – 1997)* Joance Educational Publishers Limited, Onitsha.

Anyanwu,C.A. (1998), The role of extension in agricultural credit Administration in Nigeria. *Readings in Agricultural Finance* Longman Nigeria, Press, 24 - 31

Binswanger, H. and S. Khandker (1995). The Impact of Formal Finance On the Rural Economy of India. *Journal of Development Studies* 32(2): 234 -262.

BOA (2011), The Sprouts: NACRDB, Kaduna 1(3): 24 – 26.

Bravo-Uretta, B.E., and Pinheiro, A.E., (1997), Technical Economic and

Allocative Efficiency in Peasant Farming. Evidence from the Dominican Republic. The Development Economics, 35(1):48 – 57.

Brandt, H. (1987), "The Food Crises in Africa: A Discussion of the Proposals for Remedying it; Economics (36): 89 – 99.

Central Bank of Nigeria (1996), *CBN Briefs 1996 Series*, June, Lagos

Central Bank of Nigeria (2010), CBN Briefs 2010 Series, June, Abuja

Chidebelu, S.A. (1983), Problems of Formal Holders Credit in South Eastern Nigeria. *Agricultural Administration* Vol. 13(1); 23-41

Chikezie, C. Ibekwe, U.I, Ohajianya, D.O, Orebiyi, J.S, Oguoma, N.N, Obasi, P.C, Henri-Ukoha, A, Emenyonu, C.A and Nwaiwu, I.U (2011), Size and Distribution of Income Among Rice-Based Farming Household in south Eastern States of Nigeria. *International Journal of Agricultural Management and Development.* Vol. 1(1):31 - 37.

Chirwa, E. Dorward, A. and Vigneri, M, (2004), Investigating Seasonality and Poverty, Integrated Household Survey in Malawi, a Paper Presented At the International Conference, Institute of Development Studies, UK.

Di Giorgio, G and Di Noia, C (1999), "Should Banking Supervision and

Monetary Policy tasks be given to different agencies?"; *International Fiance,* Blackwell 2 (3); 361 – 378.

Evbuomwan, E. (1993), Review of Policy and Development Objective in Agricultural and Agro based Financing. *Bullion 17 (4); 14-31*

Ekpe, E. Idiong, I.C. and Chimemeriom D. (2000) "What is the Value of Agricultural Economics Research" *American Journal of Agricultural Economics 85 (1): 26 – 32*

Eze, C.C, Okonkwo, S, Orebiyi, J.S, and Kadiri, F.A, (2011), Land Tenure System, Farm size, Innovation and Agricultural Productivity in South- East Nigeria, Contributed Paper at the Agricultural Economics Society`s 85th Annual Conference held at the University of Warwick, U.K

Federal Office of Statistics (1999), Poverty and Agricultural Sector, Abuja – Nigeria, October.

Goldsmith, R.W. (1969), *Financial Structure and Development*, New Heaven, CT: Yale University Press.

Goodhart, C.A.E. (2000), "The Organizational Structure of Banking Supervision", *FSI Occasional Paper,* No 1, 25 October.

Greenwood, J. and Jovanorie B. (1990). "Financial Development, Growth and the Distribution of Income", *Journal of Political Economy* 98(5); 1076 - 1107

Gallardo, J.S, Bikki K, Randhawa and Sacay (1997), A Commercial Bank's Microfinance programme: *The Case of Hatton National Bank in Sri lanka.* World Bank Publications

Hanson J.L. (1978), *A Text book of Economics* Macdonald and Evans, London.

Harper, M. (2005), Farm Credit and Micro-Finance. Is there a Critical Mismatch? *Small Enterprises Development* 16(3): 58 - 67

Hashim S. (2010),The Role of Baking Credits in Agricultural Financing: A Case Study of Nigerian Agricultural Cooperative and Rural Development Bank Limited. Unpublished B.Sc Project, Department of Economics, Kogi State University, Anyigba.

Henri-Ukoha, A. Orebiyi, J. S,Ohajianya, D. O, Ibekwe, U. C, Onyeagocha, F. O, Nwosu, U. I, and U.I. Nwaiwu, (2011), Gender and Net Farm Income of Cassava Farmers Under Individual Land Tenure System in Abia State*, International Journal of Agricultural Science, Research and Technology,* 1(2): 47 - 54

Henri-Ukoha, A. Orebiyi, J. S, Obasi, P.C, Oguoma, N.N. O; Ohajianya, D. O, Ibekwe, U. C, and Ukoha, I.I, (2011), Determinants of Loan Acquisition from the Financial Institutions by Small-Scale Farmers in Ohafia Agricultural

Zone of Abia State, South East Nigeria, *Journal of Development and Agricultural Economics,* 3(2): 69 - 74

Herring, R. and Litan, R. (1995), *"Financial Regulation in the Global Economy"*, Brookings Institution Press, Washington.

Horme, J.A. (1977), *Principles of Finance*, Oxford, London

Hayami, Y. and Ruttan, V.W. (1971), *Agricultural Development. An International Perspective*: Baltimore: the Hopskin Press.

Ibeawuchi, J.C. (2002), Attitude and constraints Affecting farmers Patronage oaf Financial Institutions in Ikwano Local Government Area of Abia State. A Seminar paper.

Idachaba F.S. (1980), *Agricultural Policy for Nigeria*. University of Ibadan Press, Nigeria.

Igben, M.S. and Eyo E.O. (2002), *Agricultural Economics; An Introduction to Basic Concept and Principles*. Best Print Business Press, Uyo.

Igben, M.S. (1997): Credit Delivery, Poverty Alleviation and Food Security in Nigeria: Appraisal. *Journal of Nigerian Agricultural*

Economics 10(4): 67 – 87.

Ijere, M.O. (1998), Agricultural Credit and Economic Development. *Readings in Agricultural Finance*. Longman Nigeria, Press. 4 - 9

Imran M. Hulme, D. and RutherFood, S.(2002), Finance for the Poor: From Micro-credit to micro-financial services. Journal of International Development (14): 273 – 294

Jhingan, M.L., (2009), Advance Economic Theory, Vrinda Publications (p), Delhi.

Johnson, B.F. and Mellor, J.W. (1961), The Role of Agriculture in Economic Development. *American Economic Review* (September). 566 – 593.

Johnson, S and B Rogaly (1997) *Microfinance and Poverty Reduction*: Oxfam Publication, Oxford.

Kodiechi, K.C. (2007), Analysis of Loan repayment among the Farmers: A case study of ACGSF in Enugu State, Unpublished B.Sc Project, Department of Cooperative and Rural Development ESUST.

Kogi State – wikipedia, the Free Encyclopedia 2010.

Lipton M, (1996), *success in Anti-Poverty*, Geneva: International Institute of Labour Studies 3(1): 26 – 59.

Lot, C.A. (1998), Agricultural Credit Administration by commercial Banks: The United Bank for Africa (UBA) Experience. *Reading in Agricultural Finance*, Longman Nigeria, Press.

Mckinnon, R.T. (1973), *Money and Capital in Economic Development*. Washinton, D.C. Brookings Institution.

Miller, L.F. (1975), "Present and Potential use of Credit in Nigerian Agricultural Development. Rural Development Paper, No. 6, Department of Agricultural Economics, University of Ibadan.

Musinguzi, P. and Smith, P, (2000), "Savings and Borrowing in Rural Uganda Discussion Papers in Economics and Econometrics, University of Southampton, UK.

Nwaru, J.C., (2004), Rural Credit Markets and Resource Use in Arable Crop Production in Imo State of Nigeria. Ph. D. Dissertation, Michael Okpara University of Agriculture, Umudike, Nigeria.

Nwaru, J.C., and Onouha, R.E., (2010), Credit Use and Technical Change in Smallholder Food Crop Production in Imo State of Nigeria*. New York Science Journal.* 3(11): 114 – 151.

Nweze, N.J. (1991), The Role of Women Traditional Savings and Credit Cooperative in Small Farm Development in Oguta C.A. (Ed) *Issues In Africa Rural Development,* pp: 234 – 236.

Nweke and Onyia (2001), Cited in Adegbite D.A. (2009), Repayment Performance of Beneficiaries of Ogun State Agricultural and Multi-Purpose Credit Agency in Ogun State, Nigeria (2004 – 2007). *American – Eurasian Journal of Sustainable Agriculture*, 3 (1): 117 - 125.

Nwosu, A.C. and Ogunfowora O. (1977), Capital Investment in farming: An appraisal of selected farming communities in Kwara State. *The Nigerian Journal of Economic and Social Studies* Vol. 1 (2):16 – 24.

Obiechina, M.E. (2007), Improving the Agricultural Sector Toward Economic Development and Poverty Reduction in Nigeria. *Bullion 31 (4*): 66-88.

Odoemenen, U.I. (1998), "Food and Agricultural Strategies in Nigeria. The Role of Credit Institutions". Centre for Rural Development and Cooperatives, University of Nigeria, Nsukka.

Okey, J.T.O., Adeyemo, R. and M. U. Agbonlahor, (2007), An Empirical Analysis of Microcredit Repayment in Southwestern Nigeria. *Humanity and Social Sciences Journal*, 2(1): 63 - 74

Okerenta, S.I. (2005), Evaluation of the Performance of Microfinance Programmes in the Niger Delta Region of Nigeria. Unpublished Ph.D Thesis. Department of Agricultural Economics Federal University of Technology, Owerri Nigeria (FUTO).

Okerenta, S.I, Orebiyi, J.S, and Adesope, O.M, (2007), Perceived Effects of Micro Finance Institution`s Programmes on Quality of Life of Rural Households in Niger Delta Area of Nigeria*, Medwell Journals,* 2(1): 106 - 110

Okorie, A. (1985), "Government Budgetary Allocation: A case study of The Performance of the Commercial and Merchant Banks Prescribed Allocation of Credit to the Agricultural Sector". A Paper presented at the Second biennial Conference of the Nigerian Association of Agricultural Economist at University of Nigeria. May 4 – 6.

Okorie, A. (1998), The Agricultural Credit Guarantee Scheme Fund and Credit Administration in Nigeria: Problems and Prospects. In M.O.Ijere and A. Okorie (eds) *Readings in Agricultural Finance*. Longman Publisher Nigeria. Ikeja: 38 – 40.

Okigbo, P.N. (1981), *Nigerian Financial System*: Structure and Growth. Essex; Longman Group Limited.

Okoruen, U. (1981), "The Nigerian Agricultural and Cooperative Bank; Its Operations, Problems and Prospects. In *Bullion* Silver

Jubilee Edition Vo. II CBN Publication.

Olaitan M.A. (2006), Finance for Small and Medium Enterprises in Nigeria's ACGSF. *Journal of International Farm Management* Vol.3, (2) 1 – 9.

Olagunju, F.I. and Adeyemo R. (2008), Evaluation of the Operational Performance of the Nigeria Agricultural cooperative and Rural Development Bank (NACRDB) in South Western Nigeria. *IJAERD* 1(1); 53 - 67.

Olujide, M.G. (2008), Micro Credit Supply by Country Women Association of Nigeria (COWAN) to Rural Women in Ondo State, Nigeria. *Research J. of Applied Sciences* 2 (6); 740 – 744

Olayide, S.O. (1979). "Integrated Rural Development for What? *Rural* Development Paper No. 19, Department of Agricultural Economics, University of Ibadan.

Oni, S.A. and Olomola, A.S. (1989) Technique of Attracting Credit for Agricultural Development in Africa. Paper delivered at the Symposium held in Abuja, Nigeria on Financing and Agricultural Development in Africa, November.

Onu, J.I. Amaze, P.S. and Okunmadewa, F.Y. (2000), Determinants of Credit Production and Economic Efficiency in Nigeria. African Journal of Business and Economic Research, vol. 112, 34 – 40.

Orebiyi, J.S. (2000), "The Performance of Rural Credit Markets in Imo State Nigeria" Unpublished Ph.D Thesis, Federal University of Technology, Owerri.

Orebiyi, J. S, Eze, C.C, Henri-Ukoha, A, Akubude, F.C, and Ibitoye, S. J. (2011) Demand for Institutional Credit from NACRDB by Small Scale Farmers in Imo State, Nigeria. *, International Journal of Agricultural Science, Research and Technology,* 1(2): 83 - 87

Ortese P.T. and Yaapera S. (2004), "Funding of Food and Agricultural Programmes in Nigeria: The Impact of Government and Credit Institutions" in Ogiji P. (eds). *The Food Basket Myth: Implications for food security and Agricultural Policy Reform in Nigeria*. Aboki Publishers Makurdi. 15 – 23.

Ortese, P.T. (2004) "Food Security: a requisite for sustainable Democracy in Nigeria" in Ogiji, P. (eds) . The food Basket Myth: Implication for Food Security and Agricultural Policy Reform in Nigeria. Aboki Publishers, Makurdi. 110 – 120.

Otero, M and Rhyne E (eds) (1994), *The New World of Micro-enterprise Finance – Building Healthy Financial Institutions for the poor*

West Hartford CN: Kummarian Press.

Raheem, S. (1996), Micro-enterprise as an approach for promoting Economic Development in Social work: Lessons from the Self-Employment Investment Demonstration. *International Social Work*, 39 (1): 69 – 82.

Schmdit, R.H. and Zeihger C.P (1994), *Critical Issues in Small and Micro Business Finance'* Interdisciplinare Project Consult GMbH, Frankfurt and Main September.

Shaw, E.S. (1973), *Financial Deepening in Economic Development*, New York Oxford University Press.

Stephen N.M. (1979), *Agricultural and Industrial Economics for 'A' Level* Students, Gaskiya Corporation, Zaria.

UNDP Nigeria (1996) Nigerian Human Development Report 1996. Lagos United Nations.

Williams, S.B. Ajao, A.O. and Ogunniyi, L.T. (2007), The Impact of Micro-credit on Food Crop Production in Osun State, Nigeria. *Medwell Agricultural Journal* 2(2); 319 – 323.

Wiggins, S and B. Rogaly (1989) 'Providing rural Credit in Southern India' *Public Administration and Development* (9): 215 – 232.