

# **TITLE PAGE**

## **TREND IN FINANCING SMALL/MEDIUM SCALE IRRIGATED AGRICULTURE IN NIGER STATE, NIGERIA.**

**A Research Project Presented to the Department of  
Agricultural Engineering, School of Engineering,  
Engineering Technology, Federal University of Technology  
Minna. In Partial Fulfillment of the Award of Post  
Graduate Diploma (PGD) in Agricultural Engineering (Soil  
and Water Engineering Option).**

**By**

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**May 2004.**

## **Declaration**

I hereby declared that this research project has been conducted by me under the guidance of my supervisor in person of **Engr. DR. N. A. Egharevba** of the Department of Agricultural Engineering, School of Engineering and Engineering Technology, Federal University of Technology, Minna and that I have neither copied someone's work nor has someone else done it for me.

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## Certification

This is to certify that this project is an original work undertaken by **Philemon .H. Wajal** with Registration No.PGD/SEET/2001/2002/166 and has been prepared and presented in accordance with the regulations governing the preparation and presentation of project in Federal University of Technology Minna. As part of the necessary requirement for the award of Post Graduate Diploma (PGD) in Soil and Water Engineering.

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## **Dedication**

This research project is dedicated to the Memory of my Late Father, Living Guardians, State Overseer, Region Overseer, and My Brethren in the Lord.

## **Abstract**

The Trend in financing small/medium scale Irrigated Agricultural scheme in Niger State of Nigeria is presented. Information covering the span of five years period was collected from small farmers and other relevant sources through predestined questionnaires and informal discussions. A rigorous financial analysis of the collected data reveal that in small scale operations, the financing and managing of the system will be to high degree the responsibility of the small holders and their associations. A wider range of financial services is required by the small / medium holder than before, including not only seasonal credit to cover the costs related to annual crop production. The highest year of investment was 2002 with total investment of ₦206, 417,448.00 from individuals while the cooperate body of irrigation farmers loan disbursement showed total of ₦11,126,000 with an average of ₦2,225,299 per year. Finally, government will have to aid irrigated agriculture farmers in order to solve the identified problems, which includes, high level of non-repayment with corresponding high interest rate. To make the present credit facilities effective, stringent condition attached to loan acquisition should be urgently addressed.

## **Acknowledgement**

Glory and praise be unto the Almighty God for the talent, and time granted to me and the opportunity to write these project.

My special thanks also go to all the Management and staff of all the Banking Institutions involves in Data or information obtaining or collection that facilitate this project work.

I wish to express my special thanks to Eng.(DR) ADGIZDI D. Head of Department Agric. Engineering as well as Engr. (DR) EGHAREVBA N.A. My project supervisor for his immense contribution to guide, edition, and putting me through in all these research work for reality.

My sincere appreciation goes to the Post Graduate Programme, Course coordinator in person of Engr. (DR) Mrs OSUNDE, other staff lecturers of the department and the school in general plus my PGD colleagues student for all their effort in one way or the other in seeing me through in this programme achievement.

I am also indebted to the staff of Deeper Christian Life Ministry Suleja, for their financial, moral and spiritual support in all my academic pursuit.

My due regard to Bro. Akpan in the School Of Engineering Engineering Technology examination office and Engr. (Dr.) Abolarin for their assistant and council throughout my period of study.

Words alone cannot express my gratitude. May God continue to bless and reward you all, Amen.

## **List of Tables**

1. Individual Irrigators Loan Application, Approval and Interest rate For Agric-Development Bank. .... 25
2. Individual Irrigators Loan Application, Approval and Interest rate Commercial Bank.....26
3. Co-operative body of Irrigation farmers loan Application, Approval and Interest rate Agricultural Dev. Bank.....27
4. Co-operative body of Irrigation farmers loan Application, Approval and Interest rate Commercial Bank.....29
5. Loan disbursement trend for small/medium scale irrigators between year 1999 – 2003 Niger State.....30
6. Co-operate body of Irrigation farmers Loan Application, Interest Rate and Trend of Loan disbursement.....31
7. Individual Irrigators Loan Approval and investment Analysis between (1999 – 2003) Appendix I
8. Co-operate body of Irrigation farmers loan Approval and Investment Analysis between (1999 – 2003) Appendix I

## **List of Figures**

1. Map of Niger State Location Plan ..... 16
2. Individual Irrigators Loan Approval Polygon and Histogram....20
3. Pie Chart of relative percentage for cooperate body of Irrigation farmers investment.....22
3. Graph of Loan Approval Trend.....23

## Table of Contents

Research Project Title Page	
Title Page	I
Declaration	ii
Certification	iii
Dedication	iv
Abstract	v
Acknowledgement	vi
List of Tables	vii
List of figures	viii
Index of contents	ix
<b>CHAPTER ONE</b>	
1.0 Introduction	1
1.1 Background: Investment in Small/Medium scale Irrigation	2-3
1.2 Assessing the viability of investment in small/medium scale irrigation project	3-4
1.3 And the scope of the study	4
1.4 Objectives	4
1.5 Limitation of the study	5
<b>CHAPTER TWO</b>	
2.0 Literature Review	6
1:2 Role of Financial System in the Development of Irrigation projects	6-8
2:2:0 Sources of credit to Irrigation farmers	8
2.2.1 Banks and Financial Institution	8
2.2.2 Informal Savings Group and Linkage Schemes	9

2.2.3 Co-operative Savings and Credit Arrangement between Irrigation Farmers	10
2.2.4 Personal incomes from sales of last seasoned product	10
2.3 Problems of Agricultural Lending	11-13

### CHAPTER THREE

3.0 Research Methodology	14
3.1 Description of the study Area	14-15
3.2 Map of Niger State Location Plan	16
3.3 Method of Data Collection	17
3.4 Methods of Data Analysis	17
3.5 Computer package used	17

### CHAPTER FOUR

4.0 Result of Analyzed Data & Financial Ratios	18
4.1 Individual Irrigators Loan Application Trend	18-19
4.2.1 Co-operate body of irrigation farmers, Loan Application Trend	21-23
4.3 Interest Rate and Trend of Loan Disbursement for irrigation Farmers	24-32
4.3.1 Individual Irrigators Loan Approval and Interest Rates, and Disbursement Trend for National Agricultural Co-operative and Rural Development Banks Niger State.	
4.3.2 Individual Irrigators Loan Approval for other Commercial Banks Niger State.	
4.3.3 Co-operate body of Irrigation farmers Loans Approval and Interest Rates and Disbursement Trend for National Agricultural Co- operative and Rural Development Banks, Niger State.	

## CHAPTER ONE

### **1:0 INTRODUCTION:**

The practice of irrigation in Nigeria dates back to 700 AD when the Shaduff lift irrigation system is believed to have brought from North Eastern part in Nigeria. However, the first experimental irrigation farm started in Baro, Niger State in 1908. The formal irrigation scheme came into existence in 1926 at Kware in Sokoto State. Subsequently, an irrigation policy for the Northern Nigeria was promulgated in 1953 to construct village level irrigation scheme ranging between 40 – 200 hectares all over the Region (water Resources Development journal, 2000).

Today we have sixty-two (62) major irrigation schemes operating under the umbrella of the River Basin Development Authority (RBDA) whose report is to Federal Ministry of Water Resources (National Agricultural Digest, April 20, 2004).

#### **Background: Investment In Small/Medium Scale Irrigation:**

During the past 50years, the increasing emphasis on irrigation has been one of the Major trends in agricultural development globally. As a result of massive investments in water development schemes, Irrigation provides today supplementary water to one-fifth of the worlds cultivated land, from which one third of the food crop is harvested. Much of this investment has taken place in developing

countries and many of the world's poorest people are dependent on food produced on irrigated land.

The peak in investment in irrigation was reached during the mid – 1980's when some USD 2,500 to 3,000 millions were committed per year by external funding agencies globally. However, since the 1980's total investment have substantially decreased.

The World Bank is now investing less than USD 1,000 million per year in irrigation projects and total spending by all donors and financial institution averages around USD 2,000 million per year. This development partly reflects the general decline in agricultural finances since the mid-1980's (Jorma Routsu, 2004).

However, there are specific reasons for the declining trends in spending in irrigation. The rapid growth of irrigation and optimism over food production is being replaced by a more pragmatic evaluation of irrigation prospects. While some irrigation systems have operated successfully for a long period of time, high and increasing construction cost of schemes, poor production performance, falling in real prices of crops and concern about negative environmental impact of project have significantly reduced the willingness of donors and financial institutions to invest in irrigation activities. At the same time the increasingly tight financial position of many governments has affected the possibility to raise funds for irrigation projects from local budgets – Jorma Ruotsi (2004).

On the African continent, the total irrigated land estimated to be about 12 – 13 million's hectares. The importance of irrigation varies from country to country. Furthermore, a wide range of water management situations can be observed from simple traditional ones to highly sophisticated full-control irrigation schemes. African countries, irrigation systems are polarized between few large-scale governmental schemes and numerous very small-scale independent irrigators.

The problems experienced in medium scale irrigation schemes in more remotes environment one often finds that many earlier irrigation schemes have failed, that the environment itself is fragile, that transport costs are high, that implementation of an externally designed project will exacerbated social tensions, that Marketing is poorly organized, and that the institutional capacity to manage irrigation is very limited. These factors support the investment of scare resources.

## **1.2 Assessing the Viability of Investment In Small/ Medium Scale Irrigation Project.**

Prior to the investment decision, the standard procedure is to access the viability of the proposed irrigation project through financial and economic analysis. These together with social and environmental assessment are used when rationing scarce private and development funds to alternative projects. A number of poorly functioning irrigation projects has been seen to indicate that the procedures and

methodology used to design and appraise irrigation projects have not been sound.

Moris and Thom (1990) concluded that problems in most cases arise from the failure to prepare irrigation project adequately and to conduct a rigorous financial analysis of the final design.

Risk aversion and conservative attitude towards uncertain irrigation investments obviously is a rational and justified attitude for small holders living near the poverty line.

### **1.3 Scope Of The Study**

“Trend” the general movement in the course of time of a statistically noticeable change or path, which show direction of movement. While “small scale irrigation” range from 0 to the 10 hectares of land and “medium scale irrigation ranges from 10-100 hectares of land (water resources development: 1992-1997, 2000). Only thirteen (13) Local Government Areas were considered out of a total of twenty six (26) in Niger state.

### **1.4 Objectives**

To study the role of financial institution in extending the loans to small/medium scale irrigators to burst production.

To study the internal as well as external factors for improvement of link between the banks and participating farmer on Irrigated Agriculture.

To access the strength of agricultural credit lending to develop small-scale irrigation for maximum food production within the State and the country in General.

### **1.5 Limitation Of The Study**

Major problems encountered during the course of this study is that some information are costly to be release by the bankers;

Some of the Local Government Areas in the state have no bank. So, to trace out how farmers collect credit is difficult. It took considerable time to visit farms and interview the farmers to know their loan-obtaining source before going there for data or information.

## **CHAPTER TWO**

### **2.0 Literature Review**

This Chapter presents a review of related literatures on trend in financing small/medium scale irrigation in Niger State, Nigeria and beyond. It is divided under the various subheadings discussed below.

#### **2.1.0 Role Of Financial Systems In The Development Of Irrigation Project.**

Banks and other financial systems have play and continue to play a vital role in the development and growth of irrigation in Niger State and the country at large. The most important role is by way of provision of credit hires to small/medium scale irrigation project, with mild conditionally attached to the loans granted to them. The banks also guarantee these loans, offer financial and other advisory services to small scale and medium scale irrigator. Prominent among these institutions are;

##### **A. Central Bank Of Nigeria (CBN)**

The CBN is the apex financial institution in Nigeria and has the responsibility to ensure and promote sound financial and economic system in Nigeria. Under the Central Bank of Nigeria Decree 24, 1991, and banks and other financial institutions Decree (BOFIO) 25, 1991. The CBN has powers to formulate policies and issues directives to banks to comply with such policies. Central Bank of Nigeria guarantee 75% provision made for bad debt (debt incurred from loan to farmers).

Nigeria guarantee 75% provision made for bad debt (debt incurred from loan to farmers).

**B. Nigeria Agricultural And Co-Operative Rural Development Bank: (NACRDB)**

This bank was set up to grant loans, financial and advisory services to farmers all over the country particularly the small and medium scale.

The source of fund to the bank is from Federal allocation. World Bank Assisted body FAO and other financial sectors. Therefore, have 100% provision made for bad debt incurred from loan given to farmers.

**C. Community Bank (CB)**

Community Bank Decree 1992 allows a community or group of communities to establish a bank in order to help them develop and enhance their productivity. The bank particularly targeted the small scale. Most of our local farmers obtain loan from such bank. They:

Promote rural development through provision of finance and banking services.

Enhancing the rapid development of food productive activities in rural areas, with particular reference to irrigated Agriculture and other agricultural sector in the community

To improve the economic status of small-scale producer in the rural and urban areas.

#### **D. Other Banks**

Banks like Union Bank of Nigeria, Bank of the North, Habib Bank etc. help to develop the small-scale irrigation through guaranteeing of loan to boost food production.

The Central Bank give guidelines specifying the percentage of the loan of commercial banks that most go to agriculture. From 1971 to 1974, 4% of the total loan per annum, 6% in 1976, 8% in 1980, 10% in 1983, 12% in 1985 and 15% in 1986. The interest rate is also regulated to enable individual farmers to procure the loan (Okuri 1989 and Olaniyan 1994).

#### **2.2.0 Sources Of Credit To Irrigation Farmers**

Irrigation can be financed by public and/or by collective or individual private investment.

The main reason why large-scale irrigation projects have been financed from public sources is because the scope of work was beyond private endeavor. Economic of scale in Water resources development (falling average cost with increased size) often made the scope of work so massive that only government could Corp and the resources necessary to get to the optimum level of investment.

Today, severe financial difficulties in the large-scale irrigation sector are common, often leading to trend in irrigation perforce. This because of the cost of irrigation facilities, operations and maintenance cost. Repetto (1987). Theoretical and practical studies here made a case in favor of small/medium scale irrigation and emphasized the various advantages small project may enjoy.

### **2.2.1 Bank And Financial Institutions.**

Factors such as the location of the project site, the climate, the size of plot, and the crops cultivated and the selected irrigation technology considerably affect the size and type of financial services required. Generally speaking, however, the farmers on schemes of these types require financial services (Loan) to cater for the three basic needs;

- Medium term credit for the initial construction, upgrading and major rehabilitation cost of the irrigation facilities.
- Short term credit for the seasonal costs of crop production, which include irrigation charges.
- Regular savings facilities to create possibilities to self-finance part or whole of the medium and short-term financing needs.

The wide spread failure of heavily regulated credit programmes to achieve the goals of increased production and more equitable income distribution has been the weakness of the credit-centered approach to banking, however, collateral/surety do stand for before obtaining loan.

The normal payback period is one year. The Central Bank of Nigeria through the Agricultural Credit Schemes guarantee 75% provision made for bad debt.

### **2.2.2. Informal Savings Group And Linkage Schemes**

The most basic facility that can potentially provide financial service to medium-term small-scale irrigators is the informal savings and credit groups which are commonly known, as farmer's co-operative societies. In these groups, farmers save and pool contribution in regular meeting or at the end of every harvest. Each farmer receives

his or her share of the pooled funds either in rotation by lottery or on demand. More developed group's pool funds for longer periods to be able to issue larger loans to members.

Most of these groups have a limited life span and funds are usually redistributed at the end of the cycle. While this is advantageous from the point of security, it is a major obstacle for financing irrigation investment, as no fund is available at the beginning of a new circle.

Another constraint is that the liquidity of the group is linked direct to the economic activity of the rural community, and the supply of funds from low-income earners is limited. This liquidity is tied during the time of the year when farmers purchases inputs for their cultivation activities. As a consequence, the capacity of informal groups to issue seasonal loans at the same time to many farmers is very restricted.

### **2:2:3 Co-operatives Savings and Credit Arrangement between Irrigation Farmers.**

Rural co-operatives, which provide savings and credit to irrigation farmers, can often be an appropriate way of channeling assistance to them in financing irrigation operation. From the pooled co-operatives funds loans can be issued to members especially for seasonal purposes. Farmers at the end of every harvest pooled out money set aside within a small group of people for future support. On a sustainable basis co-operative has the potential to promote saving mobilization and to reduce both the transaction costs and the risk of lending in irrigation finance.

## **2:2:4 Personal Incomes from the Sales of Last Seasoned Product.**

Most of the small-scale irrigation is personally financed. Recycling of the old money they got from the sales of last seasoned product. It is the oldest human source of financing small/medium scale irrigation, it includes contribution from rotatory saving credit association, contribution from relatives, donations etc.

Unfortunately, the inflationary pressure harsh economic condition narrow gap between income level and family consumption pattern has limit the size of investment.

## **2:3 Problems of Agricultural Lending**

Agricultural lending is hindered by a lot of problems; however, loan repayment is one of the major constraints of the various agricultural lending schemes.

Loan repayment can be defined as the amount of principal duly paid with interest by the borrowers as at when due as a proportion of the total amount owed. The method of repayment depends on the agreed term freely entered during the period of loan negotiation.

We have three basic types of repayment, short-term, medium and long-term.

One reason for poor loan repayment performance is the diversion of funds to natural hazard e.g. fire outbreak and educating children, Olayide et al (1980) observed that consumption rate competes with investment for the loan allotted to small farmers.

Some use the loan to marry many wives, build houses; this decreases the amount invested in the farm bringing about poor farm income resulting to lack of paying back the borrowed funds. On the contrary Von Pischke (1982) is of the view that consumption loan are often productive because they pressures the productivity of labour which is the main production factor in poor household. The "term consumption loan" has been renamed by IFAD as "Working Capital Loan" IFAD (1988)

Second problem is the late disbursement loan; timing is very important in farming business. Sometime loan fall after planting seasoned. Lending bank compliant of rising incidence of default.

Thirdly; the problems of inexperience trading of Loan borrowed; fresh graduate or inexperienced staff lacks of adequate knowledge on proper monitoring of the borrower of the loan.

Fourthly is the uncertainty of risk. There is no specific government program that handle the invasion of locust, out break of disease and lava, most farmer do not conduct soil testing to check against soil or water born disease.

Fifthly, farmer ignorance of banking practices which results in the distrust of official and temporary or permanent neglect of account.

Six, Transaction cost and cost credit; this involves management and associated cost in making and serving a loan. On the lenders side, it can be divided into direct and indirect cost.

Seven: collateral; land and other asset collateral that is acceptable to and practicable for formal lending institution becomes

imperative. Bins Wagner et al (1989) are of the view that collateral has four effects;

As a given interest rate;

It increases the expected return and reduces the variance of return for the lender

It shifts the risk of loss of the principal from the lender to the borrower.

It provides incentives for the borrower to repay loan.

It has a screening effect on the applicant with little or not suitable collateral. Lack of collateral is frequently stated as one of the reasons why the poor cannot obtain formal credit. Formal lender require asset as collateral that can be appropriate by the tender in case of default. The assets must not be subject to damage, disease or thefts.

The area is situated more or less on the border of the basement complex and Nupe sand stones, the basement complex consists mainly of metamorphic rocks with Local granite and basic intrusions (Wushishi), while the Nupe sand stones consist of fine sand stones sometimes overlain by Pliuthite (iron-stone).

Major crops grown in the area are, maize, g/corn, Millet, yam, Cassava, potato, melon, Onion, Spinach, pepper, beans, Rice etc. Most of the farmers gain a good support from the financial institution spread all over the state especially Nigeria Agricultural Co-operative and Rural Development Bank and other Commercial Banks in the state.

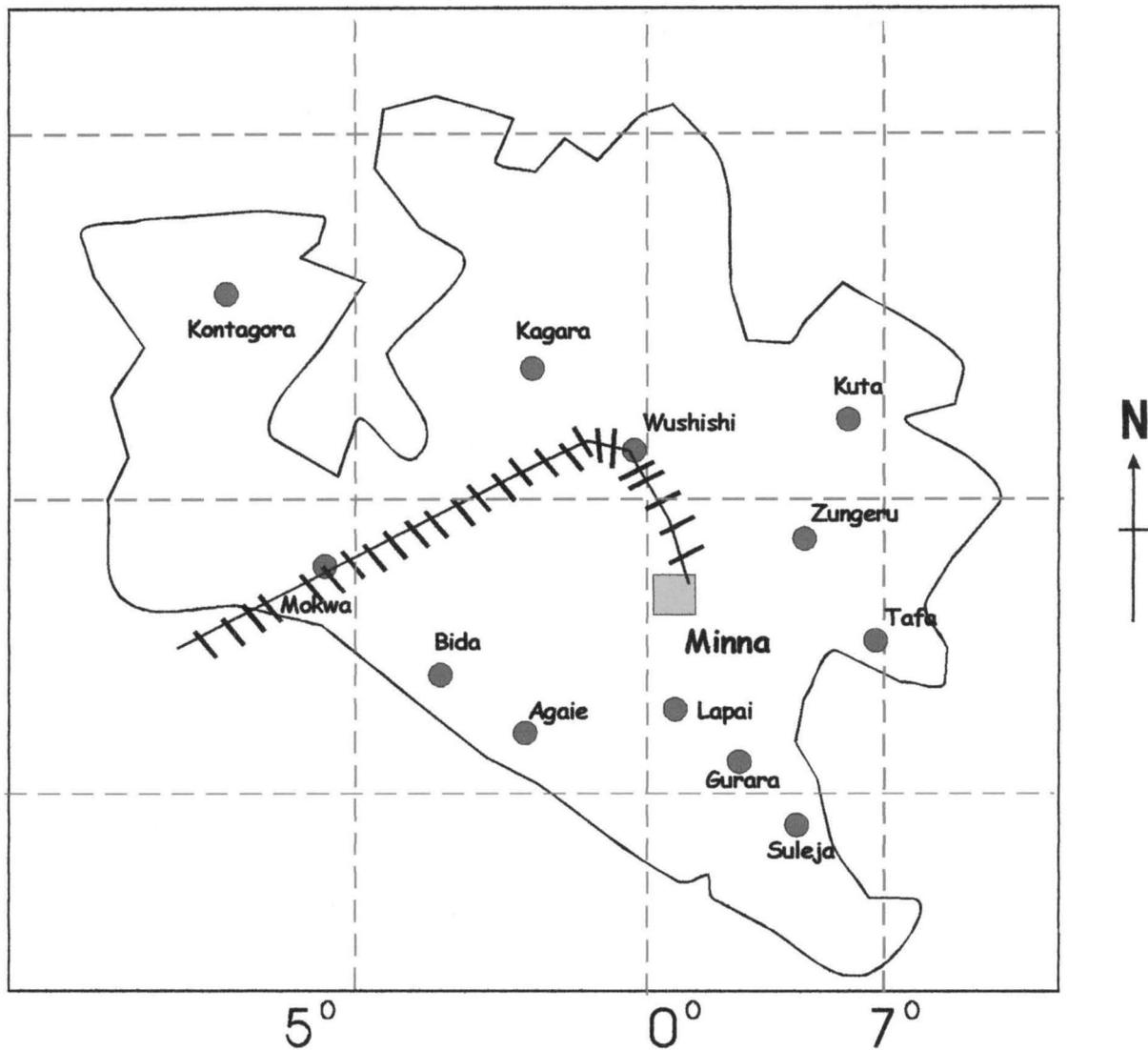


Figure 3:1- Map of Niger State Location Plan

Key	
---	Line of Longitude and Latitude
+++	Railway lines
□	Capital City of Niger State
●	Local Government Headquarter visited
—	Boundaries of the state with others

### 3:3 Method of Data Collection:

The information's were collected from financial institution within Niger State with the help of appropriate predestined "questionnaire", personal interviews, data from the Banks, and farm site visitation. The Data and information obtained is as per attached Appendix 2.

### **3.4 Method of Data Analysis**

The various analytical method used in the study were tables, Polygon, Histogram, graphs, and pie chart. This is to enhance better interpretation, proper discussion, and appreciable economic forecast.

### **3.5 Computer Packages Used**

Excel, windows power points and coral draw were used to enhance good presentation by using the various drawing tools, addition tables, and charts, graphic charts, forecasting and decision making, general statistical used, mathematical calculation, evaluation, while micro-soft word is easy to operate, make error correction easy, layout enhancement formality of the text, allow creation of multiple copies and macro- capability. Coral Draw – is a vector – based drawing program that makes it easy to create professional artwork form, simple Logos to indicate technical illustrations. It permits the integration of graphic into our document.

## CHAPTER 4

### **Results and Discussion of Results**

This chapter shows the analysis and discussion of data collected from the Agricultural finance department of most of the banks within the state, personal interview from farmers (visiting them in the field).

The information's were analyzed, tabulated, plotted in graph, chart and various percentages and statistical analysis determine for interpretation to enhance good discussion and appreciation.

#### **4.1 Individual Irrigators Loan Application Trend**

It is good to know some of the banks in the state has stop issuing Agricultural Loan to individual for a long time. This is because of the hazard confronting them. The non-repayment of the loan is one of their major problems.

Looking at the interest rate and trend of loan disbursement discussed below the relationship between the farmers and Bank need to be strengthens.

Hence table A:1 shows the yearly number of loan application and approval of the small / medium scale irrigated – Agriculture farmer in Niger State (Appendix 1).

#### **Individual Irrigators Loan Application and Approval Analysis between the year 1999 and 2003**

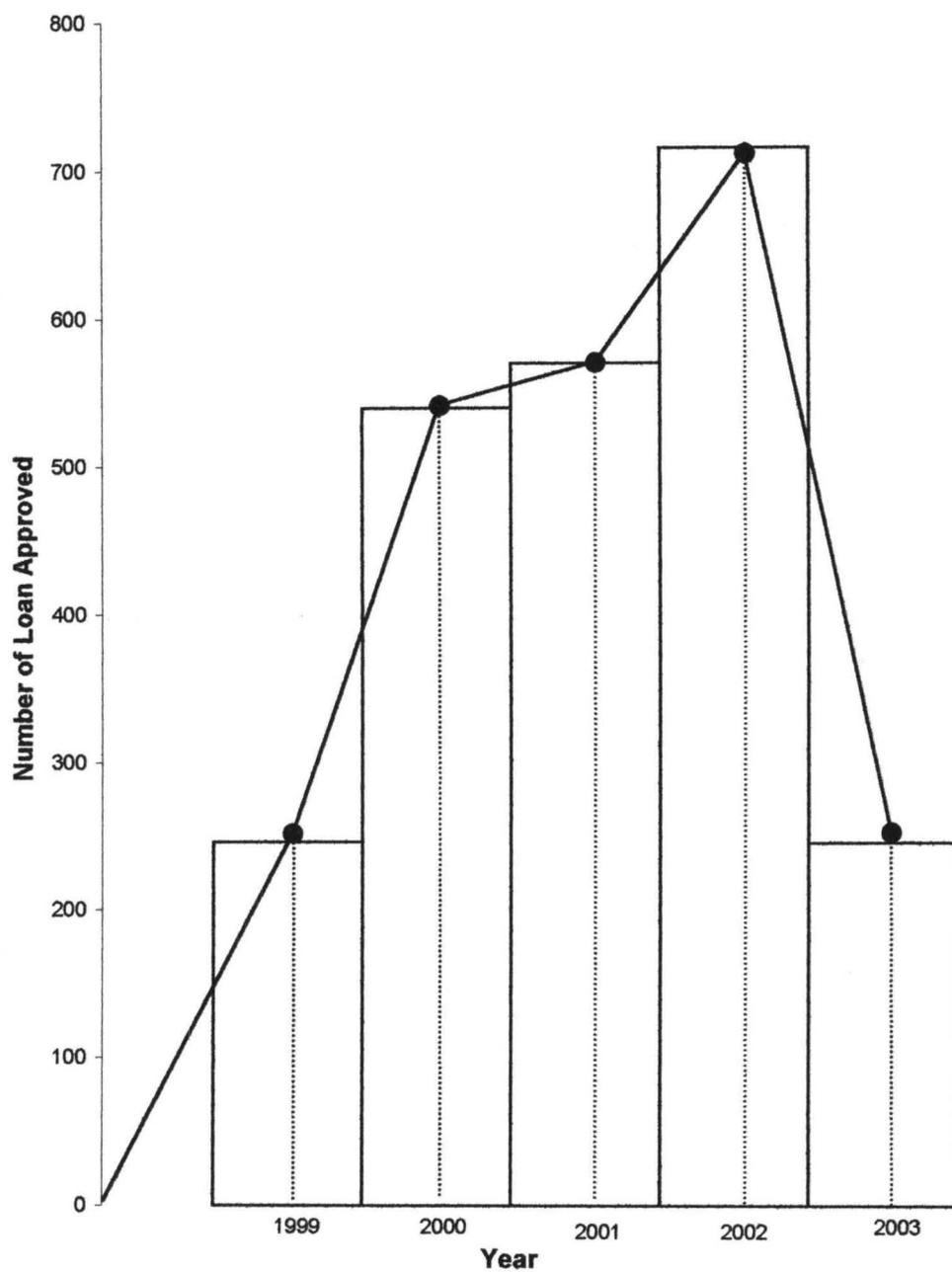
In the year 1999, 308 people applied while 246 were approved, 62 applications were not approved. The year 2000, the number of application increase to 659 while 539 were approved and 120 were

not approved. In 2001, 703 applications were received while 569 were considered while 134 applications are not approved. In 2002 the number increases to 789 while 714 were approved and 75 people were not approved. In 2003, the number decreases to 276 out of which 245 were considered while 31 applications were not approved.

Loan approved express as a percentage of loan applications were shown in percentage. 80% in 1999, 82% in 2000, 81% in 2001, 90% in 2002, and 89% in the year 2003. We have the total number of loan application as 2,735, with mean of 547 per year. Number of loan not approved total is 422 with 84.4 mean per year, while the number approved were 2313 with 462.6 mean per year. (See Appendix 1, Table A1)

The conditions for approving loans differ from Bank to bank, but prominent among all is the customers relationship with the bank, He must be operating with the bank for some time, and should have surety.

The number of loan application received and the number of approval of such loan determine the level of investment in small/medium scale irrigation scheme. It reveals the state of growth the irrigation is experiencing. The higher the number of loan approved the higher the investment or expected production in the year.



**Figure 4.1 Polygon and Histogram of individual Irrigators  
loan approval Analysis, (1999 – 2003) Niger State.**

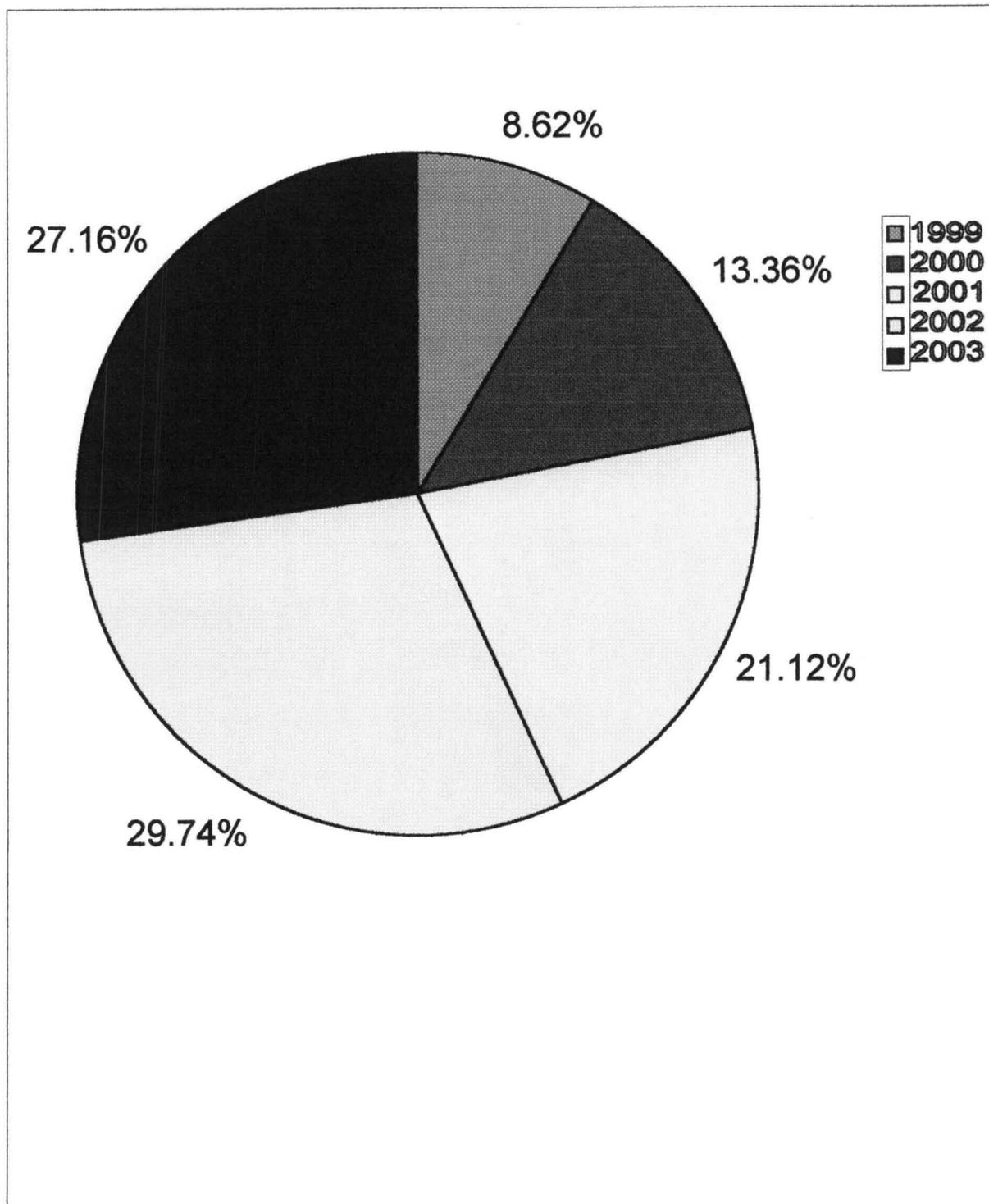
The polygon and Histogram of individual loan application and approval analysis shows increase of loan application and approval from 1999 to 2002 appreciably. These are good year of investment and production. Farmers' responses to the payment of loan received is appreciable. The Banks were willing to give more as they patronized.

The trends reach it peak in the year 2002 where it changes it direction of movement downward. It might be that there is a change in the lending polices or after that year, farmers were not responding to the payment of the loan enjoyed. Therefore, the financial institutions change their focus from Agricultural loan to other sector.

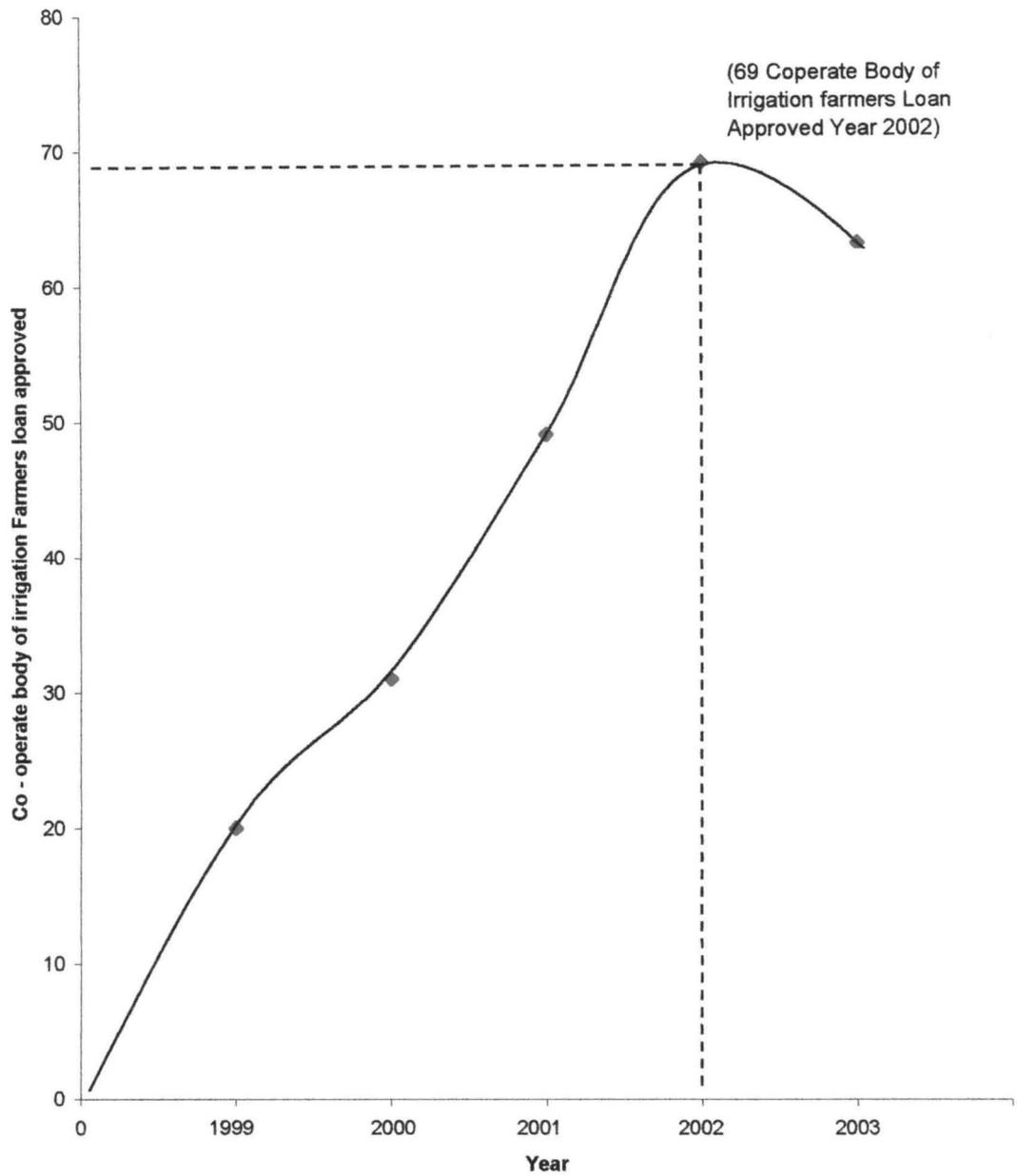
#### **4.2 Co-operate Body Of Irrigation Farmers Loan Application Trend:**

Co-operate body of Irrigation farmers here means: A group of farmers forming a (team of 5 to 20), will meet the village head to go and stand for them in the bank to collect loan or a group of people will form a body to open a farm small/medium scale.

The trend in the table shows a geometrical progression of loan application and approval, from the year 1999 to 2003. in 1999, 20 co-operate bodies applied for loan and were approved, the number increase to 31 co-operate body of irrigation farmers in 2000, 49 co-operate body of irrigation farmers applied in 2001, 69 co-operate body of irrigation farmers applied in 2002 and decreases to 63 co-operate body of irrigation farmers in the year 2003.



**Figure 4.2 Pie chart of co-operate body of Irrigation Farmers loan approval And Investment trend in Niger State.**



**Figure 4:3; Graph of Co-operative body of irrigation farmers loan Approval And Investment Analysis between 1999 and 2003 Niger State.**

The graph above shows the increase in the trend from 1999 to 2002. The years of increasing production until it reaches its peak by the year 2002, were the small / medium scale irrigation scheme has its highest investment. It also projects the year of higher production in the state.

The relative percentage investment of each co-operative body is shown in a pie chart. (See figure 4:2). The year 2002 has the highest with 29.7%, the highest year of investment. Thereafter it falls. One would ask what attributed to the decrease? The answer could not be far fetched. It could be the change in government policies, or poor performance due to uncertainty of weather, therefore the economic yield was affected. It could also be that one of the members in a co-operative body could not meet up. It is a known fact that once you did not pay the old debt, the courage to go in for a new loan will not be there.

#### **4:3 Interest Rates and Trend of Loan Disbursement For Small/medium Scale Irrigation Farmers In Niger State**

**Table: 4:3:1: Individual Irrigators Loan Approval and Interest Rates Disbursement Trend for National Agricultural Co-operative and Rural Development Banks in Niger State.**

Year	Interest Rates	No. of Application Received	No. not Approved	No. Approved	Loan Given ₦	Loan Remitted ₦	Actual Loan to be remitted. ₦
1999	16%	63	2	61	1,580,000	1,429,520	1,832,800
2000	20%	86	-	86	1,802,000	2,089,680	2,162,400
2001	8%	128	4	124	1,814,000	1,359,720	1,959,120
2002	8%	212	8	204	8,436,000	3,488,146	8,410,080
2003	8%	190	6	184	7,883,448	515,800	8,514,536
Total	=	679	20	659	21,515,448	8,882,866	22,898,936
Mean	(x) <sup>-</sup>	135.8	4	131.8	4303089.6	1,776,573.2	4,459,787.2

The table above shows the trend of loan disbursement for the period of five year. In 1999, 63 application were received 2 were not approved, 61 application were approved for a sum of ₦1,580,000. At the end of their pay back period, ₦ 1,429,620 was remitted,. Actual amount to be remitted suppose to be ₦ 1,832,800 at 16% interest rate.

In 200, 86 applied and were approved for a sum of ₦1,802,000. The farmers remitted ₦ 2,089,680 out of ₦ 2,162,400 at 20% interest rate. In 2001, 128 applied, 4 were not approved while the remaining 124 were given the loan amount to ₦1,814,00, ₦1,359,720 was remitted out of ₦1,959,120. In 2002, 212 applied, 8 were not approved while 204 approved and were given a loan of ₦8,436,000, ₦3,488,146 was remitted out of ₦8,410,080 at 8% interest rate. In 2003, the number of loan application decreases to 190, and 6 were not approved, 184 approved for a loan of ₦7,883,448, ₦515,800 was remitted out of ₦8,514,536 at 8% interest rate.

At the end of five years we have ₦22,878,936 – ₦8,882,866 = ₦ 13,997,070 loss. Mean ( $\bar{x}$ ) of ₦2,799,414 every year.

Interest rate of the year 1999 is 16%, it increases to 20% in the year 2000. And decreases to 8% in the year 2001, and remained constant up till year 2003.

The interest rates of national Agricultural co-operate and Rural Development Banks is subsidizing to enable farmer procure loan. The lower the interest rate the lesser you pay. The major source of fund to the bank is from Federal allocation. And one of the major

**Table 4:3:3:Co-operate Body of Irrigation Farmers Loan Approval and Interest Rate Disbursement Trend for National Agricultural Co-operative and Rural Development Bank, Niger State.**

Year	Interest Rate	No. of Co-operate bodies	Loan Given N	Loan Remitted N	Actual Loan to be Remitted N
1999	16%	10	530,000	(100%)=614,800	614,800
2000	20%	16	740,000	(100%)=888,000	888,000
2001	8%	26	1,470,000	(90%)=1,428,840	1,587,600
2002	8%	42	2,450,000	(92%)=4,057,200	4,410,000
2003	8%	36	2,875,000	(23%)=714,150	3,105,000
Total		130	6765000	7702990	10,605,400
Mean(x)	—	26	1353000	1540598	2121080

Co-operate body of irrigation farmers loan application, Approval and Interest Rate disbursement Trend for National Agricultural Co-operative and Rural Development Bank Niger State. The number of cooperate body of irrigation farmers, that obtain loan in 1999 were 10, it increase to 16 in the year 2000; it increase to 26 in the year 2001, in 2002 were 42, while in 2003 the number decreases to 36.

The loan given to 130 cooperate body of irrigation farmers, for a period of five years was ₦6,765,000 the total remittance was ₦7,702990. The actual amount of money they co-operate bodies suppose to remit is ₦10,605,400 (average of ₦2,121,000,080 per year). The debt amount to ₦2,902,410 to be liquidated.

The decease in the cooperate bodies number from 42-36 could be a result of non-payment of the claim loan, or government policies can alter the time of Loan disbursement.

The percentage Remittance reveals that the response to the payment from the early years was encouraging. 1999 we have 100% remittance; 2000 we have 100% remittance, it drop to 90% in 2001, 92% in 2002 and 23% in 2003.

When the interest rate was 16% in the year 1999, we have 100% remittance, at 20% in the year 2000, we have 100% remittance at 8% in the year 2001 where the co-operate bodies stand to gain, because the higher the interest rate the amount to be remitted.

There is a problem in Agricultural bank, people feel it Federal Government money, and it is given to develop the Agricultural sector of the economy.

**Table 4:3:4: Co-operate body of irrigation farmers Loan Approval and Interest Rate disbursement Trend for Commercial Banks in Niger State.**

Year	No. of Co-operate bodies	Loan Given N	Loan Remitted N	Loan Actual to be repaid N
1999	10	390,000	475,200	475,200
2000	15	395,000	483,875	483,875
2001	23	150,000	183,750	183,750
2002	27	1,026,000	1,220,940	1,220,940
2003	27	1100,000	1,300,00	1,300,000
Total	102	306,000	3672765	3672765
( $\bar{x}$ )	20.4	612200	734553	734553

In the above table 10 cooperate bodies got the loan of N390,000 and remitted N475,300 in 199, in 200, 15 cooperate bodies got the loan of N395,000 and remitted N483,875 plus the interest rate. In 2001, 27 cooperate bodies got N1,026,000 and remitted

₦1,220,940. And in 2003, 27 cooperative bodies got ₦1,100,000, redeemed, ₦1,300,000 plus the interest rate.

There is a good trend in Commercial Bank dealing with cooperative body of irrigation farmers. The farmers' response the payment, and relationship is good. There is debt, the amount loan given is ₦306,000 the loan remitted plus the interest rate is ₦3672765. We have the interest as ₦3,366,765 to the bank.

Also there is a good trend of production since the co-operate body of irrigation farmers were able to invest what they collected from the banks and pay back to the bank the amount collected with the interest.

**Table 4:3:5: Loan Disbursement Trend for Small/ Medium Scale Irrigators Between the Year 1999 and 2003, in Niger State.**

Year	No of loan applied	No of loan not approved	No of loan approved	Amount given ₦	Amount remitted ₦	Actual amount to be remitted ₦
1999	308	62	246	7,522,460	9,086,520	9,489,800
2000	695	120	539	20,038,725	23,108,680	30,550,000
2001	703	134	569	22,403,750	25,599,720	27,456,620
2002	789	75	714	31,987,146	30,768,146	37,179,180
2003	276	31	245	12,443,448	6,515,800	14,514,536
Total	2735	422	2313	94,426,083	95,078,866	119190136
Mean	547	84.4	462.6	41,283,416.6	19,015,773.2	23838027.2

The above table comprises both individual loan from Agricultural Development Bank and the Commercial Bank.

cooperate bodies got the loan of ₦395,000 and remitted ₦483,875 plus the interest rate. In 2001, 27 cooperate body of irrigation farmers got ₦1, 026,000 and remitted ₦1, 220,940. And in 2003, 27 cooperate body of irrigation farmers got ₦1, 100,000, and redeemed, ₦1, 300,000 plus the interest rates.

There is a good trend in Commercial Bank dealing with co-operate body of irrigation farmers. The farmers' response the payment, and relationship is good. There is debt, the amount loan given is ₦306,000 the loan remitted plus the interest rate is ₦3672765. We have the interest as ₦3,366,765 to the bank.

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2003	276	31	245	12,443,448	6,515,800	14,514,536
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Mean	547	84.4	462.6	41,283,416.6	19,015,773.2	23838027.2

The above table comprises both individual loan from Agricultural Development Bank and the Commercial Bank.

The year 1999, 308 people applied, 62 were not approved and 246 approved and were given a loan of ₦7,552,460. They remitted ₦9,086,520 out of ₦9,489,800. In 2000, 696 people applied, 120 were not given attention while 539 approved and were given a loan of ₦20,038,725. They remitted ₦23,108,680 out of ₦30,550,000.

In 2001, of the 703 applications, 134 were not approved while 569 were approved. Which amounted to ₦22,403,750, the sum of ₦25,599,720 was paid by the loan beneficiaries out of a total sum of ₦27,456,620. In 2002, 789 people applied, 75 were not approved, while 714 received approval which sum up to be ₦31,987,700. In 2003, 276 applied, 31 were annulled while 245 approved and given ₦12,443,448. in the (2003) the farmers remitted the sum of ₦6,515,800 out of ₦14,514,536.

For the five-year period of investment, the total loan given is ₦94,426,083, and total remittance is ₦95,078,866. Out of ₦119,190,136 plus the investment rate. We have average pf ₦41283416.6 and remittance is ₦19,015,773.2 out of ₦23,838,027.2 per year.

There is a debt total of ₦2,476,033 with average ₦4,952,810.6 per year.

The trend from the table is predicting years of good investment from 1999 to 2002; the drop signifies change in government policies.

#### **4:4 Comparism Between Individual Irrigators And Corporate Body Of Irrigation Farmers Application Trend**

We have some differences and similarities between the individuals and corporate body of irrigation farmers loan application trend.

Individual are not granted loan, he can only make over draft, which is based on their relationship with the bank. Banks only give loans to Co-operate bodies, company and sometimes gives to enterprises.

In loan repayment between individual and co-operate body of irrigation farmers, the results from table 4:3:5 and 4:3:6, total loan given is ₦94,426,083, remitted is ₦95,078,866. Out of ₦119,190,13. There is a debt of ₦24,764,053 as compared to co-operate body of irrigation farmers total in table 4:3:6 Loan given was ₦11,112,000. Loan remitted was ₦16,906,955 out of ₦19,811,265. There is a debt of ₦2,904,310 lesser than that of individual loan application and disbursement trend. Individuals find it difficult to cope with where there is hazard. When the weather does not form production that year, in case of any outbreak of disaster, pest or fire. Whatever the premium rate given by the insurance company for insuring the product cannot recover the debt.

Unlike in the co-operate body of 10 people, where there is failure of one person the remaining people can cover-up. The effect will not be much, the interest given can go along way to liquidate the debt.

Looking at the loan given column, there is no difference between loan payment and actual amount to be paid from 1999 to 2000. The farmers responded accordingly. In the year 2001 we have slight different. The loan remitted is ₦1, 610,90, while the actual loan to be remitted is ₦1,771,300. In 2000, the farmers remitted ₦5,278,140 out of ₦5,630,840. In 2003, the farmers remitted ₦2,023,150 out of ₦4,414,000.

From the totals we have loan remitted is ₦16,906,955 out of ₦19,811,265. There is a debt of ₦2,904,310.00 (average of ₦580,862) every year.

The trend from the table is predicting years of good investment from 1999 to 2002; the drop signifies charge in government policies.

#### **4.4 Comparism Between Individual Irrigators And Corporate Body Of Irrigation Farmers Application Trend**

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Unlike in the co-operate body of 10 people, where there is failure of one person the remaining people can cover-up. The effect will not be much, the interest given can go along way to liquidate the debt.

Individual irrigators loan application, approval and disbursement trend. Table 4.3.5, in the year 1999, 246 application were approved, the number keep on increasing yearly, 2000, we have 539, 2001 we have 569 and in 2002 we have 714 approved after we have a sharp decrease to 245.

Comparing with the co-operate body of irrigation farmers, in the year 1999, 20 people were approved and the number keep on increasing to the year 2002 where we have 69 approved then decreased from 69 to 63.

For any change in the government policy to regulate the banking industry, the effect is more on the individuals than the co-operate bodies we can see the fall in number of people that obtain loan on individual trend than in co-operate body of irrigation farmers trend. The change in the banking industry will still form the co-operate body of irrigation farmers.

There is a heavy amount allocated to individual than co-operate body of irrigation farmers. The difference may be as a result of the amount of revenue accruing from the co-operative business, and most co-operatives spread over a long period. Furthermore, individual farmers have difficulty in managing loan facilities, they prefer to divert such loan to speculative ventures, consumption and marry new wives.

#### **4:5 Major constraints of bank loan schemes**

There are many problems militating against agricultural loan schemes department generally in the state most especially in the banking section. Some of these includes;

##### **High level of non repayment of Loan:**

This is the major cause of the banks resistant nature to give out loan for agricultural production. Some of the commercial banks have closed the loan scheme section to agriculture because of bad debt incurred. Most of the commercial banks work with interest rate as their profit. If the discount on Treasury bill is x%, their interest is at least 1% above the Treasury bill rate to take care of risk elements. (Bad debt, profit management of loans and hazard), yet some of the banks find it difficult to liquidate bad debt.

Some of the reason attributed high level of loan default in the bank agricultural loan scheme is mix-conception about agricultural loan. Farmers feel it is government money so they will pay off the debt. That the reason why government institute Agric-Development bank is for the purpose of the Agricultural sector of the economy; some of the problems are in consistent government policy; loan diversion to other ventures with the thought to be more profitable in the shortest

possible time; natural hazard, inadequate supervision of farmers by the banks field-man.

**Preference for other sectors of the economy over agriculture:**

The agric sector has to compete with other sectors of the economy like petroleum and industry, which seem to be gaining the upper hand. This is also the case with bank rate of loan allocation. The bank prefers to invest in these other sectors where there is little or no risk associated with its investment rather than agriculture, which is very risky and very highly unpredictable.

**Factors affecting loan acquisition:**

There is a stringent condition attached to agricultural finance department that must be met by customers for loan acquisition and approval both in the agricultural development banks and commercial banks. Some of these conditions includes:

- (1) The applicant must have a current account holding with the bank for a period of 60 days.
- (2) The performance must be impressive and substantial for loan attraction.
- (3) The collateral or surety to secure loan in the bank must be three times the amount being applied for.
- (4) He must be a practiced farmer established in the farming business.

Sometimes farmers cannot meet with the demands and as a result their application will not be given consideration. It is necessary to emphasize further that, even when such application have been considered mist times, such loans are not often given to the farmers. Capital is on key constraint in the process of agricultural development in the rural and urban areas of most developing countries. This is because most farmers in eh developing countries such as Nigeria are small/medium holder farmers who have low levels of income leading to low savings and investments.

Loan is one big approach to solving the constraints of capital in agricultural production. However, inadequacy of loans and credit services is among the constraints against effective farming among rural farmers. He foregoing assertion is indeed True when viewed against the backdrop that the processes of loan acquisition and repayment are fraught with a number of problems especially in he small holder farming. Lack of collateral security is a problem militating against agricultural lending. Furthermore, large rate of default has been a perennial in most agricultural credit schemes arose from poor management procedures, loan diversion and shear unwillingness to repay loans. One of the major failures of the credit arrangement in Niger State is that, hey have complicated and time consuming procedures, which result in delays in approval. Consequently, loans are mot made available when required.

#### **4.6 Diversion of Agricultural Loan Secured by farmers.**

The result obtained in this study has revealed a number of factors that affects the acquisition of loan and repayment by small/medium scale irrigated farmers in Niger State.

The loan secured was high but there was low impact on the field. It is a question that has to be looked into. In view of this the factors affecting acquisition of loan as well as the repayment must be checked.

One of the major reasons for loan diversion is late granting of loan. A lot of procedures have to be followed before granting loan. And before it finally gets to the farmers, the cropping season has gone halfway. The utilization of such loan in farming operation will not produce a good result; alternatively the farmers then invest in another business where at the end little profit will be made. Consequently, loans are not made available when they are required.

Uncertainty of weather also affects the investment of secured loan in agric-operations. Inconsistency of rainfall registered doubt in the heart of many farmers against failure. And because of this they prefer investing it were it will yield fruit as against the risk of uncertainty of weather.

Some of the farmers used loan secured for pleasure, marrying wives, build houses, politics, naming and burial ceremonies and pay school fees for their children since the money realized from the sales of last seasoned product cannot meet up the whole demand in the house.

Personal consumption is another area most of the secured loan are diverted to; this is because most farmers, in the developing countries such as Nigeria are share-holders, who according to Lipsey

(1981) have low levels of income leading to low savings and investment.

## CHAPTER FIVE

### **5.0 Summary, Conclusion and Recommendation**

#### **5.1 Summary:**

The major finding of this research were that of 2002 has the highest member of loan application, approval, and loan given out both in individual irrigators and co-operate body of irrigation farmers While 1999 recorded the lowest number of application, approval and loan given out to farmers. The individual loan application, approval and trend of loan disbursement reveal that farmers' response to commercial bank is higher than in the Nigerian Agricultural Development bank as seen in the total. Commercial has ₦69,210,635 and ₦13842127 averages per year. While Agricultural Development banks has ₦21,515,448 and ₦4,303,089.6 as the average per year.

The remittance; commercial banks recorded ₦86,196,000 while agricultural development banks recorded 8,882,866, respectively.

In the co-operate body of irrigation farmers loan application, approval and loan disbursement trend. The total loan given is ₦7,702,990, an average of ₦1,540,498 for agricultural development bank while commercial banks recorded a total of ₦3,061,000 with an average ₦612,200 per year.

There is a low response to repayment in agricultural development bank than in the commercial banks, while in the corporate body of irrigation farmers, farmers responded to the payment of loan collected

most especially in the commercial bank. They have no defaults for the five years of study.

The interest rate differs from bank to bank in the commercial banks while the agricultural development bank is unique.

### **5.1 Conclusion**

The study identified the trend in financing small/medium scale irrigated agriculture in Niger state. It also evaluates and examines the bank lending condition and process involved.

However, this research work has shown that the commercial bank as well as the agricultural development bank responded to the financing of small/medium scale irrigation activities in the State and the country in general. We have shortcomings from the farmers as well as the government that make banks to develop stringent conditions in approving loan. Some of the major factors affecting loan acquisition are; value of collateral and farmers equity; interest charge on loan; Age of farmers. Then the major factors affecting repayment include; the number of credit source available, as well as interest charges on capital.

Also, those irrigation farmers that has benefited from the Loan scheme are transformed from their initial small-scale to more advanced form of operation.

### **5.2 Recommendation**

Deciding the best approach to irrigation financing in any given context requires careful consideration of many factors specific to that context.

In Niger state, the general macro-economic environment, its agriculture and financial sector policies, its institutional context, and its past experience with financing irrigation all have a major impact on decisions in irrigation financing. It seems obvious that irrigation farmers must assume a much greater responsibility to providing finance for their irrigation activity than was the case in the past, in order to liquidate their debt.

In supporting the provision of financing services to small/medium scale irrigator. The following should be given attention;

**A1.** Government should regulate policies in the banking industries to form small/medium scale farmers, for the new to carter for;

- ❖ Medium-term credit for the initial construction, upgrading and major rehabilitation cost of the irrigation facilities.
- ❖ Short-term credit for the seasonal cost of crop production (which include irrigation charge).
- ❖ Regular saving facilities to create possibilities to self-finance part or whole of the medium and short-term financing needs.

2. The Central Bank of Nigeria (CBN) should make sure it upholds the objectives of the agricultural credit guarantee scheme at all time.

3. The Nigerian agricultural insurance company (NAIC) should be equipped and its activities effectively monitored to ensure that genuine claims made by farmers are duly settled. In this way the effects of natural hazards on non-repayment of loan will be reduced.

B. Banks: before investments are made in small/medium scale irrigation schemes, increased attention should be given to the profitability and risk of proposed investments and the debt saving capacity of the borrowers. Investments to be financed with credit must generate an adequate financial rate of return to allow for a project-supported credit intervention. In addition, the institutional analysis should clearly show that institutions and individuals have the capacity to implement the projects.

Activities aiming at increasing self-financing the investments through active savings mobilization should be essential components in small/medium scale irrigation project. The promotion of saving in the project areas can lead to an immediate improvement in the management of finance and in the long term, will reduce the need for extend funding for irrigation investments.

(3) As irrigation-financing activities seldom function in isolation from other financial sectors operations, they should follow the prevailing policies of the financial markets. The over all policy of these finance components should be to charge and pay markets rates of interest on loans and deposits.

As part of support to savings mobilization, institutional support to local saving and credits clubs and co-operatives can lead to the evolvment of local organizations that can at a later stage serves as important links between irrigators and formal financial institutions. Promotion of these linkages can lead to increased financing of irrigation investment by local banks without the need to provide any extremely funded credit line.

**C** farmers:

Farmers should be made aware of the consequence of diverting loan to other ventures by lending institutions.

They should insure agricultural operations and make insurance premium paid of their production cost.

It is recommended that interest charge on loans obtained and value of collaterals for loan be reduced by credit institutions in the study area in particular and the country as a whole. This will encourage the farmers to borrow and repay loans appropriately.

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## APPENDIX 1

### **Individual Irrigators Loan Application And Approval Analysis Between The Year 1999 And 2003.**

**Table A.1 Individual Irrigators loan application and approval  
analysis between 1999 and 2003.**

Year	No of loan application	No of loan not approved	No of loan approved	Loan approved express as a percentage of loan application
1999	308	62	246	80%
2000	659	120	539	82%
2001	703	134	569	81%
2002	789	75	714	90%
2003	276	31	245	89%
Total	2735	422	2313	85%
Mean ( $\bar{x}$ )	547	84.4	462.6	

The number of loan application received and the number of approval of such loan determines the level of investment in small/medium scale irrigation scheme. It reveals the state of growth the irrigation scheme is experiencing. The higher the number of loan approved project, the higher the investment or expected production in the year.

**Table A. 2 Co-operate body of irrigations farmers loan application trend Co-operate Body of Irrigation Farmers Loan Application and Approval Analysis Between the Year 1999 and 2003**

Year	No in a co-operate body	Cumulative no in co-operate for the years	Relative percentage of each body
1999	20	20	8.62%
2000	31	51	13.36%
2001	49	100	21.12%
2002	69	169	29.74%
2003	63	232	27.16%
	232		100%

APPENDIX 2

Questionnaire:

- (1) Name of Bank.....
- (2) Address of Bank.....
  
- (3) Loan issued to individual / corporate bodies.
  - 1. Year..... Int rate.....init. Date of payment ..... Act. Date of payment.....
  - 2. Year..... Int rate.....init. Date of payment ..... Act. Date of payment.....
  - 3. Year..... Int rate.....init. Date of payment ..... Act. Date of payment.....
  - 4. Year..... Int rate.....init. Date of payment ..... Act. Date of payment.....
  - 5. Year..... Int rate.....init. Date of payment ..... Act. Date of payment.....
  
- (4) Types of Loan.....
- (5) NO. of individuals that obtain the Loan, please give the estimate.
  - i. Year..... NO of people..... Loan given..... amount remitted.....
  - ii. Year..... NO of people..... Loan given..... amount remitted.....
  - iii. Year..... NO of people..... Loan given..... amount remitted.....
  - iv. Year..... NO of people..... Loan given..... amount remitted.....
  - v. Year..... NO of people..... Loan given..... amount remitted.....
  
- (6) NO of Loan applied, approved and NO not approved.
  - i. Year..... No of Loan approved..... Loan not approved..... No applied.....
  - ii. Year..... No of Loan approved..... Loan not approved..... No applied.....
  - iii. Year..... No of Loan approved..... Loan not approved..... No applied.....
  - iv. Year..... No of Loan approved..... Loan not approved..... No applied.....
  - v. Year..... No of Loan approved..... Loan not approved..... No applied.....
  
- (7) What are the conditions for approving Loan.....
  
- (8) What are the bases for disqualifying a person from obtaining Loan.....