THE CONTRIBUTIONS OF AGRICULTURAL PRODUCTION PROGRAMME OF THE NATIONAL DIRECTORATE OF EMPLOYMENT TO SORGHUM PRODUCTION IN KATSINA STATE

By

Umaru Dikko Radda
MSc/Agric/13900/97-98

A Thesis Submitted to the Post-Graduate School of Ahmadu Bello University, Zaria, in Partial Fulfillment of the Requirements for the Degree of Master of Science in Agricultural Extension and Rural Sociology.

Department of Agricultural Economics and Rural Sociology
Faculty of Agriculture
Ahmadu Bello University
Zaria, Nigeria

AUGUST, 2004

DECLARATION

I hereby declare that this thesis was written by me and that it is a record of my own research work, except where reference is made to published literature and duly acknowledged.

_____ _____

Umaru Dikko Radda Date

The above declaration is confirmed:

_____ _____

Professor T.K. Atala Date
Chairman, Supervisory Committee

CERTIFICATION

This thesis titled *The Contributions of Agricultural Programme of the National Directorate of Employment to Sorghum Production in Katsina State*, by Umaru Dikko Radda, meets the regulation governing the degree of Master of Science of Ahmadu Bello University, Zaria and is approved for its contribution to scientific knowledge and literary presentation.

_____ _____

Prof. T.K. Atala — Date
Chairman, Supervisory Committee

_____ _____

Dr. D.N. Maigida — Date
Member, Supervisory Committee

_____ _____

Dr. Ben Ahmed — Date

Head,
Department of Agricultural Economics
and Rural Sociology

_____ _____

Date

Dean, Postgraduate School
Ahmadu Bello University, Zaria

DEDICATION

This thesis is dedicated to my late father, Alhaji Umaru (Barebarin Radda) and my daughters, Nana Aishatu and Aminatu.

ACKNOWLEDGEMENTS

Glory be to Allah for his enabling power upon my life for successful completion of this programme.

My sincere gratitude goes to my supervisors, Prof. T.K. Atala and Dr. D.N. Maigida who despite their numerous schedules and commitments found time to constantly guide, encourage and assist me throughout the period of this study. I especially appreciate their patience and willingness to see and discuss my problems.

I am highly indebted to Dr. S.A. Rahman for his encouragement, co-operation and many other assistance rendered to me during the course of the studies. My profound gratitude goes to late Dr. S.A. Ogunwale who was a member of my supervisory committee, for his critical comments and encouragement, may his soul rest in perfect peace.

Special thanks go to my mother, sisters, brothers, wife, daughters and my friends for the assistance and patience throughout the period of the programme and especially during the write-up of this thesis. The understanding is greatly appreciated.

My appreciation goes to His Excellency, Alhaji Umaru Musa Yar'adua for his advice and encouragement. I also wish to acknowledge the help offered to me by Mr. Macaulay K. Magaji and Mr. David E. S. Inim, for typesetting the thesis and a host of others, I forget to mention, during this hard time of the study.

ABSTRACT

Nigerian economy is faced with two major problems – food insecurity and unemployment. National Directorate of Employment was established to alleviate the problem of unemployment. National Directorate of Employment had agricultural programme as one of its activities which could help in alleviating the problem of food insecurity. The commonest crop involved in the programme was sorghum. This study, therefore, focused on sorghum production under the National Directorate of Employment agricultural programme. The study examined the contribution of National Directorate of Employment agricultural programme in the area of sorghum production in Katsina State. Two categories of sorghum producers were involved in the study – National Directorate of Employment programme participants and non-participants. The study used 90 participants and 90 non-participants randomly sampled. A structural questionnaire was used to collect data. The data analysis was done using descriptive statistics and T-test model. The study observed that there is significant difference between sorghum output of participant and non-participant of agricultural production programme of National Directorate of Employment in the study area at 5% level of significance. The major problem faced by 70% participants was lack of adequate input at right time (such as fertilizer, seeds and insecticide). In order to improve sorghum production, farmer should be provided with credit facilities and there should be timely and adequate supply of necessary inputs.

TABLE OF CONTENTS

Page

Title page i

Declaration ii

Dedication iii

Certification iv

Acknowledgements v

Abstract vi

Table of Contents vii

List of Tables xi

List of Figures xii

CHAPTER 1

INTRODUCTION 1

1.1 Background of the Study 1

1.1.1 National Accelerated Food Production Programme (NAFPP) 2

1.1.2 Agricultural Development Projects (ADPs) 2

1.1.3 Operation Feed the Nation (OFN) 3

1.1.4 Agricultural Credit Guarantee Scheme Fund (ACGSF) 3

1.1.5 River Basin Development Authorities (RBDA) 4

1.1.6 Green Revolution 4

1.1.7 Structural Adjustment Programme (SAP) 5

1.1.8 Directorate of Food, Roads and Rural Infrastructures (DFRRI) 5

Page

1.1.9 National Directorate of Employment (NDE) 5

1.2 Constraints to Nigeria's Agricultural Development Programmes 6

1.3 Problem Statement.....3

1.4 Objectives of the Study.....4

1.5 Justification of the Study.....9

1.6 Hypothesis 10

CHAPTER 2

LITERATURE REVIEW AND THEORETICAL FRAMEWORK.....11

2.1 Nigerian Economic History.....11

2.2 Unemployment; Implications and Establishment of the National Directorate of Employment.....13

2.3 Historical Background of National Directorate of Employment 16

2.4 Underlying Philosophy of National Directorate of Employment 18

2.5 Organisational Structure of National Directorate of Employment 19

2.6 Statutory Functions and Objectives of the National Directorate of Employment 21

2.7 The National Directorate of Employment Programmes.....24

2.8 A Review and Assessment of the Activities of National Directorate of Employment 26

2.9 Origin of Cultivated Sorghum.....33

2.10 Sorghum Production Trend.....34

2.11 Adoption.....37

Page

2.12 Theoretical Framework 39

2.12.1 Concepts of development 39

2.11.2 Paradigms of development 41

CHAPTER 3

METHODOLOGY 44

3.1 The Study Area 44

3.2 Sampling Techniques and Sample Size 45

3.3 Data Collection 47

3.4 Analytical Framework 47

3.4.1 Descriptive statistics 47

3.4.2 T-Test 47

3.4.3 Discussion of the variables 48

CHAPTER 4

RESULTS AND DISCUSSIONS 52

4.1 Socio-economic Variables 52

4.1.1 Age of the respondents 52

4.1.2 Household size of the respondents 53

4.1.3 Respondents experience in sorghum production 53

4.1.4 Educational status 54

4.2 Farm Inputs Utilization 55

4.2.1 Seeds (source and variety) 55

4.3 Farm Size among the Respondents 56

4.4 Cropping Systems 57

Page

4.5 Mode of Cultivation 57

4.6 Costs of Inputs 58

4.6.1 Seed costs 58

4.6.2 Cost of labour 58

4.7 Output Value 59

4.8 Years of Experience in NDE Programme 60

4.9 NDE Loan 60

4.9.1 Relevance of NDE agricultural programme 61

4.9.2 Loan procurement 62

4.9.3 Loan disbursement 63

4.9.4 NDE agricultural programme constraints 63

4.10 Hypothesis Testing 64

CHAPTER 5

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS 65

5.1 Summary 65

5.2 Conclusions 66

5.3 Recommendations 66

REFERENCES 68

APPENDIX I 73

APPENDIX II 75

LIST OF TABLES

Page

Table 1 The production trend of sorghum and some major cereal crops in Nigeria (in '000 metric tones) 36

Table 2 Major functions and structural features of four types of information source for farm practices and the expected roles of these types in the acceptance of changes in farming...38

Table 3 Rank order of information sources by stage in adoption process.....39

Table 4 Age distribution of respondents.....52

Table 5 Respondents' household size.....53

Table 6 Respondent's years of experience in sorghum production 54

Table 7 Educational status of the respondents 55

Table 8 Respondents' sources of input.....55

Table 9 Varieties of seeds used by respondents 56

Table 10 Farm size of the respondents.....56

Table 11 Distribution of respondents based on cropping systems.....57

Table 12 Mode of cultivation used by the respondents.....57

Table 13 Seed costs to the respondents 58

Table 14 Labour costs to the respondents 59

Table 15 Output value (₦) of sorghum 59

Table 16 Respondent experience with NDE programme.....60

Table 17 NDE loan acquired by participant 17

Table 18 Perception of the respondents on the benefit gained from NDE agricultural programme.....62

Table 19 Respondents NDE loan procurement problems.....62

Page

Table 20 Respondent loan disbursement problems.....63

Table 21 Respondents distribution based on constraints on NDE agricultural programme.....64

Table 22 Sorghum output of participants and non-participants.....64

LIST OF FIGURES

Page

Figure 1. Organogram of National Directorate of Employment 23

Figure 2. Map of Katsina State showing KTARDA zones.....46

CHAPTER 1

INTRODUCTION

1.1 Background of the Study

The strategic role of agriculture in accelerating Nigeria's economic growth is well recognized by most Nigerians. Whatever the importance of petroleum is, in the national economy, agriculture is still the main employer of Nigerians (Famoriyo, 1985) and an important contributor to the Gross Domestic Product (GDP). A highly productive agriculture therefore is the bedrock of national economic development since it contributes substantially to acquiring the capital needed for economic development in addition to providing employment for millions of Nigerians.

The Nigerian agriculture from the late sixties to the early seventies is that of a sector left to decline through neglect. It would easily be recalled that the oil boom of the seventies, which led to a tremendous economic expansion in industrial output and increased commercial activities, dramatically increased the wage levels in the urban areas. Now most young Nigerians want to leave a life of rural drudgery and seek the bright lights of the cities. In the eighties the sharp drop in oil prices and economic recession arising from reduced employment opportunities for hundreds of thousands of people had caused a serious problem to the economy. This was not surprising since the country's economy was heavily dependent on revenues from oil. Up to the present time, the situation has hardly

improved since the dwindling performance of the oil sector has tended to drag the country's fortunes down the economic slope.

The emergence of oil, makes agriculture of less priority in the sight of the nation, this took the attention of various regimes: General Murtala/Obasanjo, President Shagari, President Babangida and General Abacha and these regimes established some major programmes. The strategies for the improvement in agricultural production took the form of the establishment of various schemes as follows:

1.1.1 National Accelerated Food Production Programme (NAFPP)

Effort was made in the seventies, which led to the preparation of the perspective plan for agricultural development up to 1986. In this plan a major and fairly successful attempt was made at making clear cut policy statement for agricultural and rural development. In addition to setting specific targets of production which needed to be achieved for agriculture to satisfy the aggregate need of the country. During this period a National Accelerated Food Production Programme (NAFPP) which was initiated during the 1970-74 plan began to take off.

1.1.2 Agricultural Development Projects (ADPs)

The Agricultural Development Projects (ADPs) was established in 1975, jointly funded by the World Bank, Federal and State governments. The programme was charged with responsibilities of teaching farmers modern farming techniques, broadening the country's agricultural base

and accelerating production to meet the country's food need and increase exports. The result of the programme indicates that palm oil targets are yet to be attained (Smith, 1987).

1.1.3 Operation Feed the Nation (OFN)

Then suddenly came the 'Operation Feed the Nation' campaign which upset the better, more systematic approach conceived in the National Accelerated Food Production Programme (NAFPP) package (Abdullahi, 1981). The Operation Feed the Nation campaign may have been well intended but the military who ushered it in had hardly appreciated the hard facts and realities of coherent agricultural planning and its implementation. Although the programme brought agriculture into public limelight and achieved tremendous success in emphasizing the importance of agriculture, its rather disjointed short term and ad-hoc planning hardly make any serious impact on the sector up to the end of the military administration of General Obasanjo.

1.1.4 Agricultural Credit Guarantee Scheme Fund (ACGSF)

The scheme was established in 1977, with aim of encouraging commercial banks meet targets set for them with respect to minimum proportion of their credit which go to agricultural sector. The Federal Government through the Central Bank of Nigeria (CBN) guarantees up to 75 per cent of the loan in default. Despite the scheme, most commercial banks have failed to meet the set minimum target for the agricultural loans (Mijindadi, 1985).

1.1.5 River Basin Development Authorities (RBDA)

The River Basin Development Authorities were established in 1976. The programme was targeted at the development of rural areas through efficient utilization of water resources. The authorities have been criticised for not creating the desired impact in extending land areas. For example, in 1984 a total of 141,000 hectares of land were developed by all the authorities combined, only half of this was irrigated. Secondly, the Basins have not been cost effective and most of the funds allocated to them tend to be swallowed by non-agricultural activities (Mijindadi, 1985).

1.1.6 Green Revolution

In order to emphasize the significance and importance accorded to the development of agriculture, the Federal government has introduced the concept and philosophy of Green Revolution to backup its agricultural development drive in the eighties.

Green Revolution means an undertaking by the government to provide all the necessary agricultural inputs and devices which should lessen the drudgery of farming operations and boost production generally. The political interpretation of Green Revolution is unfortunately the combination of the views held by the uninformed urban wage earners and the rather over-ambitious aspiration of the rural peasant. The results are policy statements being made by politicians which are far from the realities of the situation.

1.1.7 Structural Adjustment Programme (SAP)

The programme was initiated in 1986 to form a new economic arrangement and chart a new direction for socio-economic well being of the nation. The aim of the programme was to effectively alter the structure, consumption and production patterns of the economy as well as eliminate price distortion and heavy dependent on crude oil for the country's economic survival. The main trust of the adjustment programme was hinged on deregulation, with the objectives of achieving a realistic exchange rate for the Naira, promotion of self-reliance and improvement of the balance of payment position.

1.1.8 Directorate of Food, Roads and Rural Infrastructures (DFRRI)

The Directorate was established in 1986 with the task of revolutionalizing agriculture through the transformation of rural area, realising that no meaningful development can take place without good roads, water supply, medical facilities and electricity. So far there are no serious signs that this programme will not go the way of its predecessors (Smith, 1987).

1.1.9 National Directorate of Employment (NDE)

Inaugurated on November 17, 1986, the National Directorate of Employment did not commence operation until January 30th, 1987. With initial budgeting allocation of about 100 million, the National Directorate of Employment launched by President Babangida began its battle in four-pronged approaches, namely;

i. National Youth Employment and Vocational Skill Development Programme;

ii. The Special Public Work Programme;

iii. Agricultural Production Programme;

iv. Small-Scale Industries and Graduate Employment Programme.

The broad objective of the Directorate was to promptly and effectively combat unemployment through the design and implementation of strategies to prepare the country's youth for gainful employment. This overriding goal is to be achieved through the provision of training opportunities, guidance and counselling and finance to the unemployed to generate employment for themselves and others and ultimately contribute in the expansion of the economic base of the nation. Sequel to the above mandate, the National Directorate of Employment four programmes with specific objectives and strategies were designed.

1.2 Constraints to Nigeria's Agricultural Development Programmes

Although Nigeria is endowed with a diversity of suitable ecological peculiarities which support varying forms of agricultural activity. There are numerous constraints to increased agricultural productivity as envisaged in the past years which still remains to be surmounted by the various agricultural development programme efforts of the federal government and state governments today the major constraints can be group as

i. Climatic constraints;

ii. Biological constraints;

iii. Socio-economic constraints;

iv. Scientific and technological constraints;

v. political constraints.

1.3 Problem Statement

Nigeria is faced with many desperate job seekers from various secondary and tertiary institutions. However, these individuals are susceptible to frustration as a result of lack of job opportunities within which they can begin to feed themselves. Above all, there are no jobs, and for those who are employed, retrenchment cruelly stare them in the face. The labour situation is more pathetic. It completely exposed the deficiency inherent in the economic framework that failed to recognize the importance of labour in the overall scheme of things. Labour is brutalized and made to pay through retrenchment, for what is actually a management problem. The labour situation is further worsened by the lack of foresight on the part of policy makers; who failed to make adequate arrangement for absorbing the teeming army of able bodied young men and women, turned out yearly by the various educational institutions which expand at the same time during the oil boom. The result was an unemployment figure moving towards the 3 million mark (ILO, 1990).

Recognition of the unemployment problem, in addition to the myriad of other economic problems, nevertheless informed the need to chart a new course, in order to arrest the situation from degenerating further. Thus,

NDE was created in 1986. The challenges are therefore to find out whether NDE agricultural production programme for graduates and school leavers has achieved its objectives.

Specifically, the study addressed the following questions:

1. What are the socio-economic characteristics of participants and non-participants of agricultural production programme of National Directorate of Employment?
2. What is the contribution of agricultural production programme of National Directorate of Employment to sorghum production?
3. What are the problems experienced by the Directorate in the implementation of the programme?
4. What are the problems that the participants experience with the programme?

1.4 Objectives of the Study

The broad objective of the study is to examine contribution of agricultural production programme of National Directorate of Employment under sorghum production in Katsina State.

The specific objectives are to:

1. examine the socio-economic characteristics of both participants and non-participants of the programme.
2. compare the performance of participants and non-participants of the programme on sorghum output.
3. identify problems experienced by the Directorate in attainment of its agricultural objectives.

4. assess the problems experienced by the participants of the programme.
5. Suggest solutions to the problems experienced by the Directorate and the participants.

1.5 Justification of the Study

Recognition of the unemployment problem, in addition to the myriad of other economic problems, nevertheless informed the need to chart a new course, in order to arrest the situation from degenerating further. National Directorate of Employment (NDE) was specifically created to provide jobs. The Directorate was set-up to facilitate the effective creation of jobs for most Nigerian youths. Since inception, NDE has claimed to be making steady progress at implementing her policies and programmes that would lead to the achievements of her objectives, thereby achieving its motto: 'Job for All'. The Directorate is financed by the Federal Government of Nigeria, there is needs to evaluate the contribution of the NDE agricultural programme, in order to see how justifiably the money is spent by the government to carry out her objectives. This study would attempt to give an in-depth information on the activities of agricultural production programme of National Directorate of Employment for graduates and schools leavers in Katsina State and its contribution to sorghum production.

1.6 Hypothesis

The hypothesis put forward for this study is that:

There is significant difference between the sorghum output of participants and non-participants in agricultural production programme of National Directorate of Employment in Katsina State.

CHAPTER TWO

LITERATURE REVIEW AND THEORETICAL FRAMEWORK

2.1 Nigerian Economic History

For a nation endowed with abundant human and natural resources, it is inconceivable that Nigeria could fail to evolve an appropriate policy mix that could ensure orderly development in the light of existing developmental theories and options of which the country could have easily availed itself with. It becomes even more appalling, when it is realized this country has the good fortune of being blessed with the oil, a resource whose import has never been lost on those who have it and which altered the economic history of the world by turning hitherto poor countries into ones flowing with dollars. Yet, for all that, Nigeria is reeling under the worst economic condition.

Nigeria, in the actual sense of the word, is blessed. From the coastal fringes to the arid north, the country is endowed with diverse natural resources. Underneath its bowels are a motley of mineral resources. Climatically, the country boasts of a tropical climate that ensures throughout the year, conditions that favours the growth of agricultural crops and rearing of animals. Above all, are the human resources, bubbling, energetic and approaching the 120 million mark. In actual fact, Nigeria is one of the eight most populous countries in the world (Olatunde, 1993).

As a historical fact, it is true that Nigeria on attaining independence, was a country full of promise. Basically agrarian in nature, with almost 80 percent of the then estimated less 60 million people fully engaged in agriculture, the country though relatively developing, could not be said to be poor. Agriculture was then the main stay of the economy, contributing over 70 percent of the country's foreign exchange needs and providing the funds to finance the laying of infrastructure of its future greatness.

Petroleum actually changed the course of the nation's economic history. If brought in its wake, wealth in the true sense of the word, when prices of crude oil quadrupled in the seventies from less than $8 per barrel to almost $32. The accumulation of dollars saw an expansion in all forms of economic activities. Regrettably, the wealth from oil was mismanaged. Even the expansion of economic activities was mostly within the urban centres. The rural areas were completely neglected. Everything was totally uncoordinated. The resultant attraction offered by the urban centers also led to considerable drift of labour from the rural area, thereby worsening the agricultural problem, which continued to be neglected by the government in spite of the wealth from oil; part of which could have been used to modernize the sector.

The labour situation was more pathetic. It completely exposed the deficiency inherent in the economic framework that failed to recognize the importance of labour in the overall scheme of things. Labour was

brutalized and made to pay through retrenchment for what was actually a management problem. The labour situation was further worsened by the lack of foresight on the part of policy makers, who failed to make adequate arrangement for absorbing the teeming army of able young men and women, turned out yearly by the various educational institutions which expanded at the same time during the oil boom. The result was an unemployment figure moving towards the 3 million marks (Job Creator, 1996).

The criminally minded among the youths for lack of avenue to dissipate their energy took to criminal activities; including prostitution among the ladies. The combined effect of this is the worsening of the country's social problem, crime rates have shot up. Armed robbery has become their cup of tea.

2.2 Unemployment Implications and Establishment of the National Directorate of Employment (NDE)

Unemployment and under employment in Nigeria are a "serious social problem with political as well as economic consequences" (Lewis, 1967). Open unemployment is concentrated in rural areas (Muecller and Zervering, 1969; Worman, 1973). Open urban unemployment is widespread in Nigeria and averages as much as 14 percent of the urban labour force (Kiyby, 1969). "Unemployment has both economic and social implications that are universally recognized as harmful both to society at large and to the individuals who is without work" (Henry, 1973). Generally, in any

nation where unemployment is prevalent, the dichotomy between the employed and the unemployed constitutes social inequality which is a ready tinder box for social upheavals.

The conventional notion of an unemployed person, according to Henry (1973), is a person who has no job and is actively seeking one (though actively is not a very helpful notion). The unemployed may not be economically worst off in the society, i.e., income is below the country's wage. An unemployed, as said further by Henry (1973) must have some means of support or otherwise he could not survive long. A man with a wife and children who cannot move in with working relatives simply cannot be unemployed. He must work even if only at the least productive activities. On the other hand, an individual who has means of support may opt not to accept a low paying, undesirable job, even when it is available. The latter would be counted as unemployed, the former not. Yet the former is evidently much the worst off economically.

Iwuji (1985) sees industrial employment in the modern sector not increasing since the total population increases at a rate equal to or in most cases higher than modern industrial production, initiative to create new job is being dampened and reduced. The rapidly rising urban population and, school and colleges outputs have far exceeded the growth of wage earning employment.

"The situation of unemployment as seen from the foregoing has frightening implications for the economy of the nation due to the under-

utilization of abundant human and material resources" (Chukuwuma, 1987). For the victims of unemployment, the consequence could be deleterious. The individual victim of unemployment as seen in our cities today is prone to a feeling of frustration due to inability to realize, incite or acquire potentials. This feeling ultimately leads to deviant behaviours expressed in crimes and other anti-social behaviours. The effects of unemployment on the larger society are equally disastrous.

Employment gives a person the recognition of being engaged in something worth while. This is according to Amartja (1979). Employment can be a factor in self-esteem and indeed in esteem others. Much of course depends on the class one comes from. To a member of the "leisured class," the fact that one does not work for ones living may be in fact, a source of pride, but for those who have to work for living, lack of employment is not only a denial of income, it can also be a source of shame. In the same way, if a person is forced by unemployment to take a job that he thinks is not adequate for his purpose or not commensurate with his training, he may continue to feel unfulfilled and indeed may not even regard himself as employed".

In his briefing, Chukwuma (1989), said that the armies of unemployed youths which constitute a potent and destructive force are easily susceptible to manipulation by aggrieved influential elements in the society, hence no country can expect to have a good image as long as a considerable proportion of its labour force lacks the means to earn a decent

living, attain a certain degree of dignity or security. Indeed, employment for the labour force has come to be regarded as an important index of government ability to fulfill its socio-political will to guarantee human rights. Hence National Directorate Employment was launched with onerous task of providing employment, decree of 1989 promulgated on the 19th October, gives the National Directorate Employment the backing to prosecute its mandate.

2.3 Historical Background of National Directorate Employment

Recognition of the unemployment problem, in addition to the myriad of other economic problems, nevertheless, informed the need to chart a new course, in order to arrest situation from degenerating any further. This basically took the form of a new economic arrangement tagged the Structural Adjustment Programme (SAP), initiated in 1986, to chart a new direction for the socio-economic well being of the nation. The aim of SAP is to effectively alter the structure, consumption and production patterns of the economy as well as eliminate price distortion and the heavy dependent on crude oil for the country's economic survival.

The main thrust of the adjustment programme is hinged on deregulation, with the objective of achieving a realistic exchange rate for the naira, promotion of self-reliance and improvement of the balance of payment position. Besides the frontal attack at the core of the economic problems, the government also took steps to correct other malaise that arose from the recessed economy, such as, unemployment and the

dwindling fortunes of the rural areas, through the establishment of specialized agencies to tackle these problems.

With respect to the rural areas, the government set up Directorate of Food, Road and Rural Infrastructure (DFFRI), while for the unemployment problem, the National Directorate of Employment (NDE) was specifically created for jobs. The National Directorate of Employment is actually the outcome of the work of a committee called the Chukwuma Committee, set up by the government, with the mandate to finding lasting solutions to the unemployment scourge, by analyzing the problem and how it can be effectively tackled.

Modalities for combating the unemployment problem informed the decision to set up the National Directorate of Employment to implement the strategies suggested by the committee and adopted by the government in the form of a programme, to arrest the situation from further degeneration. Inaugurated on November 17th, 1986, the National Directorate of Employment did not commence operation until January 30th, 1987. With the initial budgetary allocation of about N100 million, the National Directorate Employment, launched by President Ibrahim Babangida began its battle in a four-pronged approaches are, namely:

(a) The National Youth Employment and Vocational Skill Development Programme.

(b) The Special Public Work Programme,

(c) The Agricultural Sector Employment Programme,

(d) The small scale Industries and Graduate Employment Programme.

As noted by President Babangida, the underlying philosophy of the core programme is based on the cornerstone of gainful employment, comprising training, opportunities, finance and guidance to the unemployment on a continuous basis for the creation of job for themselves and for others.

2.4 Underlying Philosophy of National Directorate Employment

The Directorate resumed operation in 1987 before its enabling decree was promulgated in 1989. The underlying philosophy of the National Directorate Employment is self-enterprise which emphasizes self-employment in preference to wage employment. This philosophy is pursued through the implementation of three well articulated programmes, namely; Agriculture, Small-Scale Enterprises (SSE) and Vocational Skills Development (VSD). A fourth programme, the Special Public Works (SPW), was originally established to provide temporary wage employment to unemployed graduates and school leavers.

The agricultural sector employment programme of the Directorate was designed to provide self-employment for graduates and non-graduates in agriculture through the adoption of labour intensive production techniques under the programme, loans are granted to beneficiaries to set up own arable or livestock farms.

The SSE promotes self-employment among Nigerian youth by inculcating in them spirit of self-enterprise, creativity and self-reliance. A

training programme, the Entrepreneurship Development Programme (EDP), is put in place to prepare beneficiaries for the challenge of self-enterprise. The SSE also grants loans to beneficiaries to set up owner-managed small-scale businesses.

The VSD programme is a skills acquisition programme. The programme is founded on the realization that a large proportion of Nigerian's unemployed persons are youths who lack marketable skills under the programme, youths are trained in one of eighty trades.

The SPW programme was originally designed to provide temporary wage employment to graduates and non-graduates pending when they secure permanent job. Participants in the programme are engaged in the construction works which emphasize labour intensive techniques. However, the programmes underwent modifications aimed at promoting self-employment as in the other programmes of the Directorate.

2.5 Organisational Structure of National Directorate Employment

Each of the programme highlighted above is run in a department headed by a Director. Apart from the four programme departments, however, there are 4 (four) services departments, each headed by a Director, which provide support services to the job creation programmes of the NDE. They are:

(a) Finance and Supplies (F&S) Department

(b) Inspectorate Department

(c) Personnel Management (PM) Department

(d) Planning, Research and Statistics (PR&S) Department.

There are also some branches/units whose activities facilitate and enhance the effective implementation of the programmes of the Directorate. These are:

(a) Information and public relations (IPR) branch

(b) Loans co-ordination (LC) branch

(c) International collaboration (IC) branch

(d) Women employment branch (WEB)

(e) Internal audit section

(f) Computer unit

(g) Library unit

Each of these arms is headed by an officer below the ran of Director. The Directorate has a branch office in each of the then 30 states of the Federation and Abuja.

The management structure of National Directorate Employment is headed by the Minister of Labour and Productivity, who is the Chairman of the Board, while the Director-General (DG) is the chief executive of the Directorate (Figure 1). The Board is responsible for policy formulation. There is also a State Advisory Committee in each state and Abuja which liaises between the National Directorate Employment and the respective state government and communities in the implementation of the Directorate's programme in the state.

Serving as an upper advisory body, however, is the National Advisory Council (NAC) which is composed of the Chairmen of the State Advisory Committee (SAC). The WAC is headed by a member of the National Directorate Employment Board, and provides a link and flow of policy implementation, information and decision between the SAC, and the Board. The NAC reports to the Board.

The Directorate in 1992 took step forward to improve its human resource capability strengthen its existing programme and found new ones. Some of the policies approved and implemented were:

(a) the ratification of the condition of service, the scheme of service, the pension scheme for the staff of National Directorate Employment

(b) the inauguration of the National Advisory Council in accordance with the provisions of National Directorate Employment Decree;

(c) expansion of teachers in the mobile training workshops to widen the scope of training opportunities provided for the participants of the school-on-wheels scheme; and

(d) the verification and intensive monitoring of trainers involved with the National Open Apprenticeship scheme of notable importance however, is the Directorate's efforts at reinvigorating its employment drive in the informal sector. Two major schemes/programmes in this efforts were established:

2.6 Statutory Functions and Objectives of the National Directorate Employment

In his speech, of 1987, the Chief of General Staff, Vice Admiral Augustus Aikhomu gave the following general objectives:

(i) To design and implement programmes in an attempt to combat mass unemployment.

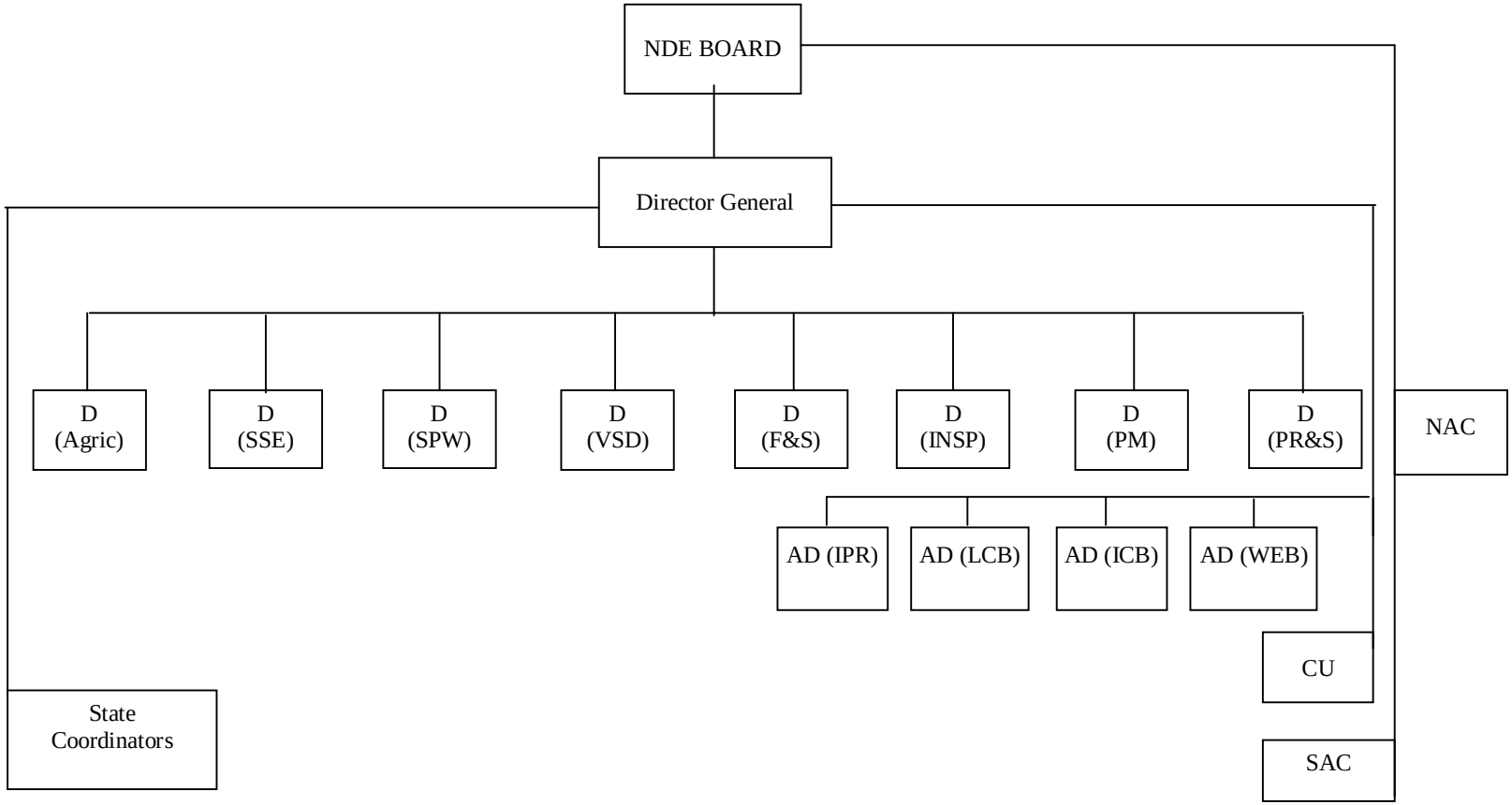
(ii) To articulate policies aimed at developing work programmes with labour intensive potentials.

(iii) To obtain and maintain a data bank on employment and vacancies in the country with view to acting in collaboration with other government agencies.

Broad objective:

The broad objective of the Directorate is to promptly and effectively combat unemployment through the design and implementation of strategies to prepare the country's youth for gainful employment.

This overriding goal is to be achieved through the provision of training opportunities, guidance, and counseling and finance to the unemployed to generate employment for themselves and others and ultimately contribute in the expansion of the economic base of the nation. Sequel to the above mandate, the National Directorate Employment's four programmes with specific objectives and strategies were designed.



KEY:

SSE	=	Small-Scale Enterprise Programme
SPW	=	Special Public Works Programme
VSD	=	Vocational Skills Development Programme
F&S	=	Finance and Supply Department
INP	=	Inspection Department
PM	=	Personnel Management
PR&S	=	Planning, Research and Statistics, Department
NAC	=	National Advisory Council
SAC	=	State Advisory Committee
IPR	=	Information and Public Relations
LCB	=	Loan Coordination Branch
WEB	=	Women Employment Branch
CU	=	Computer Unit

Figure 1. Organogram of National Directorate of Employment (NDE)

2.7 The National Directorate Employment's Programmes

The following are the programmes set up in order to meet home the National Directorate Employment's objectives:

A. Agricultural programme

The agricultural programme of National Directorate Employment is designed and implemented to produce self-employment for unemployed graduates and school leavers in agriculture. The programme is implemented by adopting modern agricultural practices. It also has the additional objectives of enhancing the production of food and fibre and also of stemming rural-urban drift.

The programme is implemented through three schemes, namely:

(i) Graduate Farmers Scheme

(ii) School Leavers' Farmers' Settlement Scheme; and

(iii) School Leavers' Farmers' Training Scheme.

Under the graduate farmers scheme, selected graduates of universities, polytechnics, and colleges of education are each allocated five hectares of cleared farmland with a loan package of ₦15,000.00 for arable farming. Those selected for livestock farming are given a loan package of ₦25,000.00 each.

The school leavers' farmers training scheme offers training in modern agricultural practices to recruit schools leavers in National Directorate Employment training farms and government farm institutes for a period of nine to twelve months.

The school leavers' farmers settlement scheme provides two hectares of cleared farmland and a loan package of ₦8,000.00 to each trained school leavers.

B. Small-Scale Enterprises (SSE) Programme

The main objectives of the SSE programme is to inculcate in Nigerians, particularly the graduates of tertiary institutions, the spirit and concept of entrepreneurship, creativity and self-reliance. It is also to encourage them to seek self-employment. To this end, the department provides loans and other necessary supports to graduates and other unemployed persons to set up small-scale enterprises in order to create jobs for themselves and others.

The SSE programme, which took off in 1987, has three schemes, namely:

(i) Graduate job creation loan scheme

(ii) Mature peoples scheme

(iii) Vocational skills development scheme.

The Vocational Skills Development (VSD) programmes is aimed at providing unemployed youths with vocational skill acquisition training in order to enhance their employment potentials. This is pursued through the implementation of the following schemes, viz:

(i) The National Open Apprenticeship Scheme (NOAS)

(ii) The School on Wheels Scheme (SOW)

(iii) The Waste to Wealth Scheme (WTW)

(iv) The Resettlement Loans Scheme (RLS)

(v) Special Public Works Programme (SPW)

Special Public Works (SPW) programme was designed to provide temporary wage employment to unemployed graduates and school leavers.

As a result of the restructuring of the programme, the following schemes were the focus of attention:

(i) Public Works Scheme

(ii) Environmental Beautification Scheme

(iii) National Sanitation Scheme.

2.8 A Review and Assessment of the Activities of National Directorate Employment

A lot have been said by the various bulletins and pamphlets sent out from the Directorate's office as to its achievement. The Directorate's activities in most of the programmes have recorded tremendous successes (Chukwuma, 1992). These achievements have far-reaching implications particularly for the informal sector of the economy. The achievements were as follows under each programme.

1. National Open Apprenticeship Schemes (NOAs)

Between 1988 to 1995, a total of 360 to 750 trainers have been recruited under this scheme and placed as apprentice with master, craftsmen and institutions for period long enough for them to acquire needed skills. Out of this number, about 140 to 370 people have already

graduated. About 2,500 of them have established their own businesses through family capital while some 8,500 others have been gainfully employed by establishments and organizations nationwide. A resettlement scheme was launched on 4th December, 1991 by President Ibrahim Babangida for about 50,000 of the graduate trainers. About 564 disabled persons benefited from the skill acquisition programmes. A breakdown of the participants shows that:

(i) 174 apprentices have been trained in the Spinal Cord Injuries Association (SCIAN) located at Maryland, Lagos.

(ii) 100 persons have been trained at the Centre for the Blind in Katsina State.

(iii) 200 disabled persons are learning various trades at the Mariri Rehabilitation Centre in Kano State.

2. The Schools on Wheels Scheme (SOW)

The pilot exercises commenced in April, 1990 in seven state which include Anambra, Bauchi, Cross Rivers, Kano, Kwara, Ogun and Rivers. Some 441 youths underwent training in different trades in the pilot stage. As from August 1991, the School-on-Wheel (SOW) scheme was fully operational, and has started generating direct employment for over 500 persons and training for about 15,000 skilled artisans nationwide.

3. Waste-to Wealth Scheme

Under this scheme, a total of 5,715 youths have been trained in 12 states of the federation and members of the Nigerian armed forces,

Nigerian Army Officers' Wives and Naval Officers Wives have benefited. About 2,332 of these beneficiaries have been given loan packages and have started their own business.

4. Small Scale Enterprises (SSE)

Under the graduate job creation loan, National Directorate Employment has so far funded 2,335 enterprises with loans of about ₦50,000 each granted to the promoters. These business have not only provided employment for the promoters but also other Nigerians.

In the nature peoples' scheme National Directorate Employment has funded 133 enterprises for retired officers with loans up to ₦200,000 each, under the rural exportable craft scheme, about ₦2.4 million was made available by National Directorate Employment as loans to rural women while 410,000 unemployed graduates, NYSC members and other Nigerians have benefited from enterpreneurship development training.

5. Public Works Programmes (PWP)

Originally, some 35,600 participants were recruited and deployed to execute various projects nationwide. However, since the restructuring of the programme, the PWP has been extended to the construction of low cost houses. National Directorate Employment has recently assisted the Borno State Housing Co-operation in the construction of 100 units of low cost houses in Maiduguri through the provision of labour. Through such collaboration, the National Directorate Employment is providing employment to some 400 able-bodied Nigerians for a period of six months.

The public works participants are also engaged in the construction of the Kaduna State School board building, the fencing of the Federal Ministry of Labour and Productivity's Office in Benin, North-west Afforestation and a Trade Test Centre in Kaduna and host of other projects in some states of the Federation.

6. Agricultural Sector of the Employment Programme

For graduates a total loan package up to a maximum of ₦15,000 for arable crop farming or ₦18,000 – ₦25,000 for livestock/poultry farming can be provided per participant as loan which will be distributed in kind and in cash. A total of 9,425 unemployed graduates have received loans under Graduate Agricultural Loan Scheme and have gone into commercial farming. A total of 15,000 school leavers have undergone modern agricultural techniques training under the school. Agricultural scheme and about 7,500 of these trainers have been settled. Indeed, it is estimated that the entire agricultural programme has generated over 500,000 jobs across the country through job multiplier effects.

Between 1988 and 1995 over 75,400 hectares of farmland have been cleared and distributed to beneficiaries. Loan packages totaling ₦212,049,258.00 have been given to participants who have now set up commercial farming and are providing employment for themselves and others.

7. Resettlement Loans Scheme

The resettlement loans scheme was established to assist selected NOAS graduates who lack the means to set up own business and cannot find wage employment. In order to ensure that the young entrepreneurs have access to requisite professional advice, the scheme also provides them with management support service.

Some of the activities undertaken during the years are as follows:

i. Development of guidelines for the operation of the resettlement loans scheme.

ii. Verification of business/residential addresses of the loan beneficiaries and their guarantors.

iii. Sourcing of financial intermediaries, e.g. the Community Banks and People Banks through which the loans could be administered.

iv. Processing of applications of prospective beneficiaries.

The following achievements were recorded during the years:

i. A pioneer resettlement loan disbursement was made to twenty-nine (29) graduates of NOPs while 12,064 applications were processed for the next round of loan disbursement.

ii. Additional tools and equipment were procured for distribution to beneficiaries.

8. Placement and Counselling Unit

The placement and counseling unit was established to provide the following service functions:

i. Guidance and counseling for NOA's trainees in career choice

ii. Conflict resolution between trainees and trainers where they exist.

iii. Orientation and placement services for NOA's trainees

iv. Provision of counseling services to members of staff of National Directorate Employment.

Some of the activities by the unit during the year include:

i. Participation as facilitators in the "training the trainers course" organised by UNDP/ILO/NDE.

ii. Participation in the orientation and placement of new trainees.

iii. Provision of counseling services to the beneficiaries of one million jobs creation programme.

9. The One Million Jobs Creation Programme

The creation of one-million jobs in three months was an incredible milestone in NDE's operations since the Directorate started operation in 1987. The programme was a crisis-management strategy launched to curb the spate of demonstrations and outbreak of violence that engulfed Lagos and other Nigerian cities in May of 1992. Although the demonstrations and violence erupted as a result of some undefined socio-political discontent among the citizenry, the management of National Directorate Employment rationalized that the Directorate could be easily blamed to bear the brunt of the unrest – unemployment being easily and often believed to be a major cause of unrests. The poor and jobless is generally believed to be easily incited to cause social upheavals.

The Directorate in July 1992 acted promptly to quickly create one-million jobs in one month nation-wide for the idle, the jobless and the pauperized. The programme was to create minor works in the informal sector of the economy centering operations at local government areas of the country, and it drew its clientele predominantly from the rural and urban households.

The programme was implemented through the following schemes, market gardening, agro-allied enterprises, handicraft and cottage industry, mixed-grill, labour based construction projects and the National Open Apprenticeship Scheme (NOAS).

Under labour-based construction project, 59,300 beneficiaries were recruited for public works projects on a monthly stipend of ₦300.00 for each beneficiary. Beneficiaries of the market gardening scheme were each given a loan package of ₦500.00 to start operations. Similarly, participants setting up handicraft/cottage industries and mixed grill ventures were given ₦1,000.00 each while skill acquisition facilities were put in place for participants to acquire vocational skills under the NOAS.

The implementation of the programme was phased into two. The first phase was completed in 1992 and a total of 169,814 unemployed youths benefited, while the total number of direct and indirect jobs created in the first phase of the programme was 540,581.

The programme turned out to be one of the most successful efforts carried out by the Directorate since it started operation. It was unique in

terms of its grassroots effects, popular appeal, and the volume of jobs created within a short time.

2.9 Origin of Cultivated Sorghum

Although there are several centres of diversity for sorghum including India. China, Ethiopia, and West Africa. The routes along which the crop has spread are not known. The first known record of cultivated sorghum appeared in a 2700-year-old carving found in an Assyrian palace (Anderson and Martin, 1949, cited by Arnon, 1972). Though there appears little doubt that the first cultivated sorghum appeared in Africa, it is uncertain though possible that they were developed in Ethiopia and the surrounding countries (Dogget, 1970).

The ancestors of what we now know as sorghum may have been carried across North Africa to West Africa about 3000 *B.C.* at which lime Sahara was possibly better watered than it is today. It is probable that cultivated sorghum was carried to the region of the upper Niger River many centuries ago (Hulse *et* al., 1980)

Introgression studies indicated that cultivated sorghum probably developed through disruptive selection (Dogget, 1965), Crossing easily occurs between wild and cultivated types, it is speculated that as man began to select, there was substantial gene How between improved and unimproved types. This gene flow would decrease as field sizes became larger, The selection by man and nature would provide disruptive forces resulting in diverse (polymorphic) populations. These disruptive forces

have been continuously active (and are still active) influencing cultivated and wild populations, Most intermediate forms do not exist long in nature; those back-crossed by cultivated crops would lend to contribute genes in the direction of cultivated types; and those back crossed by the wild types would tend to contribute genes to wild population. Polymorphic populations would tend to be maintained and change over the years. New forms would arise leading to the types of sorghum now in cultivation.

2.10 Sorghum Production Trend

Martin *et al*. (1976) gave a more accurate breakdown of sorghum production in the world. He reported an annual world production figure of 72 million tonnes from 58 millions hectares, giving an average of 1.3 tonnes per hectare. Leading world producer include U.S.A., India, Nigeria, Argentina. Mexico and Sudan. Yields from Africa and India vary between 300 and 2,000 kg/ha with an average of 650 to 750kg/ha from rainfed sorghum. Irrigated hybrid sorghum is said to yield about 1800 kg/ha here compared to 4500-6000kg/ha obtained in the USA (Martin *et al*., 1976).

Estimated total production of sorghum in West Africa in 1971 was about 58.2 million tonnes from an area of about 9,7 million hectares, corresponding to a yield of about 6,000kg/ha (Kassam, 1976). Aggregate sorghum production in Western Africa as a whole virtually stagnated over the past 20 years. It decreases at an annual compound rate of -0.2% from the 1969-71 average of 532,000 tonnes to 507, 000 tonnes in 1991 (Debrah, 1993).

The growth in sorghum production from the 1971 average of 532,000 tonnes to the 1979 average of 575,000 tonnes was due to increasing growth rates in harvested areas as well as growth in yields. Higher yields rather than increasing harvested areas appeared to explain much of the growth in aggregate production. Between 1979 and 1986 harvested areas of sorghum dropped substantially (from 921. 000 hectares to 802,000 hectares) while yields increased moderately from 759 to 777kg/ha. A combination of these resulted in a reduction in aggregate production from 575,000 tonnes in 1979 to 557,000 tonnes inl986 (Debrah, 1993). Similarly, between 1986 and 1991 increases in sorghum yield were not high enough to compensate for rapid decline in harvested areas leading to a shortfall in aggregate production.

In the Nigeria Savannah zone, grain sorghum is an important crop. It is grown in an estimated area of 4.5 million hectares wit annual production output of about 6 million tones. The sorghum crop occupies over 45% of the total land devoted to cereals in Nigeria, with cultivation spreading from the North to the Middle-Belt zones and further down to Oyo and Osun states in the South (NAERLS, 1997). Egharevba (1979), reported that increasing tota] annual production in Nigeria is mainly through increasing hectare put to sorghum rather than through increasing yields per unit area. Within the two decade (1959-1979) land were devoted to sorghum production has increased from about 4.1 to 6.1 million hectares. Nigeria's expected yield from 6.5 million hectare was 4.2 million tonnes giving an average yield of about 600kg /ha (Anonymous. 1979). Oke (1976)

also reported that 4 million lonnes were produced in 1969/70. The Northern slates producing about 99% from about 6 million hectares of land, when compared to the figure obtained from the U.S, the average grain yield of sorghum in Nigeria is considered low.

Some of the factors responsible for the low yield could be lack of adequate fertilizer applications, poor crop management and the use of low yielding varieties. Table 1 shows the production trend of Sorghum and other major cereal crops in Nigeria Between 1980 and 1998.

Table 1. The production trend of sorghum and some major cereal crops in Nigeria (in '000 metric tones).

Year	Sorghum	Maize	Millet	Rice	Wheat
1980	3,346	612	2,354	105	24
1981	3,364	720	2,682	158	26
1982	3,740	766	2,666	212	26
1983	3,292	594	2,783	145	26
1984	4,608	2,058	3,349	157	27
1985	4,911	1,190	3,684	196	113
1986	5,455	1,336	4,111	283	132
1987	5,455	4,612	3,905	808	139
1988	5,182	5,268	5,136	2,081	565
1989	7,265	5,008	4,770	3,303	554
1990	4,185	5,768	5,136	2,500	554
1991	5,367	5,810	4,109	3,226	455
1992	5,909	5,840	4,501	3,260	515
1993	6,051	6,290	4,602	3,065	33
1994	6,197	6,902	4,757	2,427	35
1995	6,997	6,931	5,563	3,202	44
1996	7,514	6,217	5,803	3,122	47
1997	7,954	6,285	5,997	3,230	49
1998	8,401	6,435	6,328	3,486	51

Source: CBN, 2000.

2.11 Adoption

Adoption is a decision to continue full use of an innovation though which an individual passes from first hearing about an innovation to the final adoption. Generally while the diffusion process involves passing of news about an innovation between persons, the final decision to adopt or reject the innovation is purely a personal or individual decision. Alao, 1979 has also claimed that in Nigeria these stages can be fused into three – awareness, trial and adoption.

Awareness – Is the first stage and involves the individual learning of the existence of an innovation. However, at this stage he has little knowledge about it. He may have heard about the innovation from other family members, friends, neighbours, the mass media, change agents, sale promoters or local co-operative organisation. Depending upon the individual's felt need, he might want to go on an find out more about the innovation.

Trial- is the stage during which the individual actually applies or practices the innovation on a small scale. He may be assisted in the trial by the sales promoter or change agents who may actually demonstrate how the innovation works and then assist the individual to try by himself.

Adoption – This is theoretically supposed to complete the process of adoption. However most people after acquiring a new thing or idea continue to be curious. They do not seem to fully trust the innovation until it has worked for sometime and really proved itself. The above stages are also not very definite stages neither does anyone have to necessarily pass through each sage at all times.

Table 2 below summarizes the sources of information in the adoption process.

Table 2. Major functions and structural features of four types of information source for farm practices and the expected roles of these types in the acceptance of changes in farming.

Sources of information	Major functions	Structural and operational features	Expected roles in acceptance of change in farming
1. Mass media	1. Providing information of widespread interest	1. Impersonal contact	1. Creation of awareness and interest.
	2. Advertising	2. One way communication	2. Provision of preliminary information.
		3. Content of general interest	
2. Neighbours and friends, relatives	1. Providing social status	1. Personal contact	1. Help in decision making.
	2. Solidarity	2. Frequent contact	2. Providing instruction in putting the practice into effect.
	3. Mutual aid and assistance	3. Two way communication	
		4. Content oriented to local and personal experiences	
3. Government agricultural agencies	1. Disseminating information on specific practices.	1. Both personal and impersonal contact.	1. Help in decision making.
	2. Teaching principle of farming.	2. Limited to those seeking information.	2. Providing instruction in putting the practice into effect
	3. Providing special and technical services	3. Two way communication.	
		4. Content of general, special and local interest.	
4. Salesmen and dealers	1. Buying and selling of materials and equipment.	1. Personal and impersonal contact	1. Providing instruction is operated or used.
	2. Offering at times professional services	2. Content oriented to economic and special interests.	2. Sometimes provide first knowledge about a practice.
		3. Two way communication	

Source: Ekong E. Ekong (1988).

Table 3. Rank order of information sources by stage in adoption process.

Awareness	Trial	Adoption
1. Mass media	Friends and neighbours	Friends and neighbours
2. Friends and neighbours	Agricultural Agencies	Agricultural agencies
3. Agricultural agencies	Dealers and salesmen	Mass media
4. Dealers and salesmen	Mass media	Dealers and salesmen

Sources: Ekong E. Ekong (1988).

2.12 Theoretical Framework

The theoretical framework of this study is the major focus of this chapter. It consists of concepts of development, paradigms of development and discussion of study variables.

2.12.1 Concepts of development

Varying views and definitions exist on the concept of development. These views and definitions are presented below.

In the early 1950s, development was seen as almost synonymous with economic growth. According to Aziz (1978) the most serious notion of that time was economic development and how this could be promoted simply by pushing up the investment ratio from 5-6% of Gross National Product to at least 18% and by setting up import substitution industries.

By the early 1970s, development experts and authorities became skeptical and disenchanted with the conventional theories that dominated national and international development strategies, organizations and programmes for many years (Combs, 1980).

Seers (1980) conceived development not only as economic Growth but also as situations in which a country has adequate food and Jobs and the disparities in their income levels greatly reduced. In addition to these, Seers (1981) considered as also important to development, ownership as well as output in the leading economic sectors, consumption pattern that economize on foreign exchange, institutional capacity for research and negotiation and cultural goals of the country. These according to Mobogunje (1986) emphasize self reliance as a critical component of development.

Todaro (1973) also saw development as going beyond economic phenomenon. He suggested that economic development should be seen as attaining various development goals, economic growth being one of such goals. To him, development is a multi-dimensional process which involves the re-organization and re-orientation of economic and social systems. Emphasis should therefore be placed not only on income and output but should include radical changes in institutional, social and administrative structure as in popular attitudes, customs and beliefs.

Despite the recognition of the basic inadequacy of development models adopted by many developing countries, there seems to be considerable reluctance to seriously face the political and social dimension of development. Aziz (1978) has also observed that there is yet no intellectual or conceptual consensus on all the objectives of development. It is now commonly accepted that the first objective of development should be to meet every one's basic needs. Beyond this, the consensus breaks. According

to Seers (1980) and Todaro (1973) without economic growth, there could be no development. This should not be the case. Development should comprise every aspect of human life. These aspects include economic, social political and environmental. Agricultural development is one of the most essential aspect of economic development in the Third World countries because all other aspects of development depend on it. To consider which aspect of development is necessary for national development, one must consider firs those who participate in development.

2.12.2 Paradigms of development

There are two most prominent paradigm of development: development 'from above', and development 'from below'. Until recently, development 'from above' has dominated; spatial planning theory and practice. This development 'from above' has its roots in neoclassical economic theory and its spatial manifestation is in the growth centre concept. According to Hansen (1968), the concept of development starts only in relatively few dynamic sectors and geographical cluster, from where it will spread to the remaining sectors and geographical areas. This 'trickle down' process is supposed to start at the global level and then filter down and outward to national or regional units, either through urban hierarchy (Berry, 1972), through input-output relations (Perroux, 1964), or through the internal channels or multiplant business organization (Hansen, 1968; Pred, 1976) or large scale government organization. Its emphasis has been on urban and industrial capital-intensive development; the highest

available technology and maximum use of external and scale economies. This usually involves large investment projects, increasing scale of the private and public organizations required to transmit development through these integrated units, large re-distributive mechanisms; and reduction of economic, social, cultural, political and institutional barriers, which might hinder transmission (Stohr and Taylor, 1981). This paradigm has the weakness of seeing a few urban individuals capable of initiating development ideas, while the participation of the rural sector in development ideas is neglected.

The weakness of development 'from above' challenges were tabled against it and a new paradigm, development 'from below', has been advocated. The new paradigm development 'from below' shows the need to actively involve the public in the planning of rural development projects. This arises from the fact that many rural development projects require specific behavioural changes among the target population to succeed. The participation of the poor masses in the planning, implementation and evaluation process can not be wished away in a developing country like Nigeria with its strong class system or socio-economic differentiation- It has to be promoted through institutionalization to provide a meeting point to engage in a dialogue on public issues (Ariyo, 1989).

According to the development 'from above' paradigm, if development must be truly people centred and satisfy the basic needs of the people, then the people who are directly affected must be effectively involved at every

stage of the project planning, implementation and evaluation process. This leads to securing the consent and co-operation of the people, the voluntary release of resources for project implementation, a reliance among the people and wide spread participation in the planning process which will lead to more wide spread distribution of benefits of development (Lele, 1975). Ideally people should identify their own needs and problems. However, in a development situation where they come into contact with ideas and techniques beyond the scope of their traditional knowledge outside assistance is often necessary.

Development, 'from above' paradigm will best suit National Directorate of Employment objectives of providing job for all through the promotion of self-reliance and improvement of the balance of payment position. Besides the frontal attack at the core of the economic problems, the government took steps by establishing NDE to create jobs by providing credit facilities for them to engage themselves in area of agricultural production. Apart from that, the agricultural sector has been able to provide 80% of the population with a source of livelihood. It is therefore, important to focus attention on agricultural production sector of the economy that has been the backbone of development in those Third World Countries.

CHAPTER THREE

METHODOLOGY

This chapter describes the study area, population characteristics, sampling techniques, sample size, data gathering method, statistical analysis, limitations of the research design.

3.1 The Study Area

The study was conducted in Katsina State, which is located between Latitude 11° - 13°N and Longitude 6° - 9°E of the prime meridian. It is bounded to the North by Niger Republic, to the South by Kaduna State, West by Zamfara State and East by Kano State. It covers a land mass of 23,938 square kilometers with a population of 5.081 million (NPC, 1991). The State has about 863,000 farming families and a cultivated area of about 1.64 million hectares.

The climate is tropical with an annual rainfall between 500 to 1000 mm in the driest and wettest parts of the state respectively. The mean annual temperature is between 26 and 28° Celsius. The weather varies according to the season of the year. Katsina State falls between Sahel/Sudan savanna vegetation zones. The soils have textures running from sandy loam to sandy. The growing period of the major crop covers about 180 days. The main crops grown in the State include cotton, cowpea, sorghum, millet and groundnut. Some farmers keep livestock like cattle, sheep, goats and poultry. The area is composed of “Hausas” and “Fulanis”.

The relative humidity is constantly below 40°C except in few wet months when it sometimes goes up to an average 60°C. The duration of dry season is about 6 – 8 months, from late September to April. There are agro-allied industries operating in the state like the Flour Mills, Cotton Crushing Company, Cotton Ginneries, Katsina Oil Mills, etc.

Some agricultural agencies operating in the state are Cotton Company, Cotton and Agricultural Agencies, Nigerian Agricultural Cooperative and Rural Development Bank (NACRBD). The basic unit of the social organization is the household in which economic activities are organized. The household head is responsible for organizing and controlling the economic and social activities of the household members. Age, sex and status are considered in the assignment of responsibilities to members.

The study covers three LGAs in the state, with Katsina State Agricultural Rural Development Authority (KTARDA) used as an entry point. Fig. 2 is a map of Katsina State showing the Zones and area of study within the state (Charanchi in zone I, Funtua in zone II and Dutsinma in zone III).

3.2 Sampling Techniques and Sample Size

Stratified random sampling was employed in the study, since the study is focused on two sets of population, that is participants and non-participants. The technique first divided the target population into 2 sets

and selection was done from each set of the population by random sampling so as to have a representation of population in each set.



Fig. 2. Map of Katsina State Showing the Study Area.

The total number of participants (sample frame) was 842 out of which 90 were chosen. Also, 90 non-participants were chosen in the study area, out of the 780 household heads listed on the sample frame.

3.3 Data Collection

Data were collected from both primary and secondary sources. The primary sources of the data were collected from the beneficiaries and non-beneficiaries of the programme based on administration of a structured questionnaire (Appendices) and personal interview with the staff of the Directorate. The secondary data were collected mainly from the Directorate annual reports, bulletins, magazines and other publications of the Directorate.

3.4 Analytical Framework

Analytical tools employed for this study are:

(i) Descriptive statistics and

(ii) T-Test.

3.4.1 Descriptive statistics

The simple descriptive statistics used include measures of central tendencies such as percentages and frequency distribution. These tools were used to describe personal characteristics such as age, sex, educational level, household size, farm size, farming experience, credit obtained

.

3.4.2 T-Test

The test of hypothesis about whether or not there exists significant difference(s) between means of variables from two or more groups. However, use t-test, we chose appropriate level of significance. In most studies, this is usually done at 1%, 5% and rarely at 10% and below. The calculated test value is compared with appropriate table value at the chosen level of significant (this is the critical value in table value). It is useful for comparing differences between means and ascertaining significance relationship between variables. The model is expressed as

$$t = \frac{Mp - Mnp}{\sqrt{\frac{S_p^2}{Np} + \frac{S_{np}^2}{Nnp}}}$$

where:

Mp = Mean sorghum output of participants

Mnp = Mean sorghum output of non-participants

S_p^2 = Variance of participants

S_{np}^2 = Variance of non-participants

NP = Number of participants

Nnp = Number of non-participants

3.4.3 Discussion of the variables

Independent variable

Age: One important factor that is expected to inhibit or facilitate the impact of a social interaction is age. Most societies recognise age as a basis

of stratification but some of them emphasize it more than the others (Davies, 1949). This indicates that categories which it establishes are ranked in order of prestige (Parson, 1961). In African societies age tends to determine one's accessibility to certain benefits. Moreover, young farmers is in a much healthier state to withstand the rigours of agricultural profession (Omolade, 1976; Fajimade, 1976).

However, certain constraints surround the young farmers which give the old farmers an advantage over him. For example, young farmer's access to land is highly limited by the old farmer's hold on it.

Household size: In the rural communities, especially in the developing countries the size of family is related to the socio-economic status of the household head (Atala, 1980). A large family size has more labour available and, therefore, more willing to take risk, thus the members would go out in search of farm innovations. This may be a source of improving farm output and standard of living.

Level of education: Education has been associated with a high status (Lionberger, 1960). In other words, the higher the level of education of a people, the higher their status position. Formal education refers to the formal learning process which instruct people with the aim of developing and strengthening their powers of the mind. It involves the development of the mental powers that may enable the educated to view issues objectively rather than complying traditional rigidity, that goes with the uneducated

mind. The relevance of education to agricultural development programmes could be seen in the opportunities that are opened to the educated farmer to read and understand extension bulletins, posters, instructional materials, etc.

Farm size: The size of a farmer's farm may also affect the impact of agricultural development activities. Farm size is a physical extent of the land a farmer devotes to his farm operation and/or the intensity of his farm business (Ekong, 1983).

Use of hired labour: The use of farm labourer is associated with farm size. In other words, the labourers available to work on the farms may determine size of farms that would be operated. The size of farm under operation may in turn determine the output and income derivable from it. The farmers would also tend to have better standard of living as a result of increases in farm income. Mobayo (1987), found a positive and significant relationship between labour and gross farm income.

Credit: Generally credit is considered as a vehicle for rural development (Nelson, 1967). It is accepted that the level of earning hence savings of most farmers in the developing countries is so low that unless some form of credit is provided, many of them will not be able to increase production and income. In most cases farmers are too poor to finance improved agricultural techniques. This lack of credit may be a disincentive to the success of agricultural development programmes (Kidel, 1968).

Dependent variable

Output: An immediate goal of agricultural policy in Nigeria is to produce more food. One way of doing this is to encourage greater output per crop. Gross farm output is the total output of crops grown by a farmer over a period of time (Atsu, 1974). The ability of a farmer to improve on his/her output may be determined by his/her physical and mental well-being, managerial skill, exposure to extension services, credit facility and access to inputs. Relationship between gross farm input and the selected socio-economic variables, therefore, would be expected.

Gross farm income as defined by Norman (1976) is synonymous to total value of farm production. Gross farm income is important in determining one's position in a social system. Farm income of an individual also influences the problems and difficulties that the farmers might encounter and the means that are available to him to solve such problems (Atala, 1980).

CHAPTER 4

RESULTS AND DISCUSSION

4.1 Socio-economic Variables (Objective 1)

Certain socio-economic variables were considered in this study. These provide valuable information for better understanding of the National Directorate of Employment agricultural activities in the State and an avenue to compare the characteristics of participants and non-participants in National Directorate of Employment programme.

4.1.1 Age of the respondents

Many (60%) of the participants in the National Directorate of Employment agricultural production programme were between the age of 21-40 years. Young farmers constituted the majority because, they participated in the programme mostly after graduation from school. The 60% of the respondents belonged to young and middle age range were physically and more mentally alert in putting more energy for better production. The non-participants were older as shown in Table 4, hence more experienced than the young farmers.

Table 4. Age distribution of respondents

Class	Participant		Non-participant	
	Frequency	Percentage	Frequency	Percentage
21-30	9	10.0	9	10.0
31-40	45	50.0	21	23.3
41-50	24	26.7	36	40.0
51-60	9	10.0	6	6.7
61-70	3	3.3	18	20.0
Total	90	100.0	90	100.0

4.1.2 Household size of the respondents

The size of the household was determined by the number of wives, children and other dependants actually living with the respondent in the household. Table 5 presents the distribution of the respondents based on household size for both participants and non-participants of National Directorate of Employment agricultural production programme 47% and 40% respectively had 1-10 members in their household, while 11 – 20 household size was obtained for about 23% of the respondents. Only 27% has 21-30 household members, other classes had small proportion. In some cases labour may be relatively cheap to come by, where there are many people in the household to help in farm activities (Obinne, 1989).

Table 5. Respondents household size.

Household size	Participant		Non-participant	
	Frequency	Percentage	Frequency	Percentage
1-10	42	46.7	36	40.0
11-20	21	23.3	21	23.3
21-30	24	26.7	24	26.7
31-40	0	0.00	6	6.7
41-50	3	3.3	3	3.3
Total	90	100.0	90	100.0

4.1.3 Respondents experience in sorghum production

Non-participant had more years of experience in sorghum production, about 70% had 1 – 20 years of experience in sorghum production in the study as shown in Table 6. This relates closely to their

age. Most of the participants of National Directorate of Employment programme were young, whereas non-participants were older, hence more experienced in sorghum production.

Table 6. Respondents' years of experience in sorghum production

Sorghum production experience	Participant		Non-participant	
	Frequency	Percentage	Frequency	Percentage
1-10	42	46.7	30	33.3
11-20	30	33.3	15	16.7
21-30	15	16.7	9	30.0
31-40	3	3.3	9	10.0
31-50	0	0	6	6.7
51-60	0	0	2	3.3
Total	90	100.0	90	100.0

4.1.4 Education status

Level of formal education is a key factor to note in this study, because loan was given by National Directorate of Employment to graduates and secondary school leavers. About 73% of the participants were secondary school leavers, while remaining 27% were graduates. This indicates that in the study area high proportion of the secondary school leavers benefited from National Directorate of Employment. Majority of non-participants have no formal education as shown in Table 7. Since education provides the individual with ability to accept positive change,

level of education may have effect on the use of technology in agricultural production.

Table 7. Educational status of the respondents

Educational status	Participant		Non-participant	
	Frequency	Percentage	Frequency	Percentage
Primary	90	100.0	9	10.0
Secondary	66	73.3	18	20.0
Tertiary	24	26.7	15	16.7
Non-formal	0	0.00	48	53.3

4.2 Farm Inputs Utilization

4.2.1 Seeds (source and variety)

Majority of respondents who participated in National Directorate of Employment agricultural programme used seeds that were obtained from agricultural agencies, while non-participants obtained their seeds from the local market and used local seeds for their production. The reason for using hybrid seeds by participant may not be unconnected with their level of education and the participation in National Directorate of Employment programme which exposed them to agricultural agencies (Table 8).

Table 8. Respondents' sources of inputs

Class	Participant		Non-participant	
	Frequency	Percentage	Frequency	Percentage
Local market	33	36.7	78	86.7
KTARDA	42	46.7	9	10.0
ADP	0	0.00	3	3.3
FASCOM	9	10.0	0	0.0

UAC	3	3.3	0	0.0
NDE	3	3.3	0	0.0
Total	90	100.0	90	100.0

Table 9. Varieties of seeds used by the respondents.

Variety	Participant		Non-participant	
	Frequency	Percentage	Frequency	Percentage
Local	21	23.3	75	83.3
Hybrid	69	76.7	15	16.7
Total	90	100.0	90	100.0

4.3 Farm Size among the Respondents

To determine this variable, respondents were asked the number of hectares they had in operation. Majority of the farmers were small-scale operators with land holding ranging from 0.5 – 5 hectares for participants, while the non-participant had larger farm size of about 5.5 – 10 hectares, which constituted the majority (Table 10). The reason may not be far from the fact that non-participant are more experienced and more rooted into the farming business than the participant who were just farming to solve their unemployment problem. Also availability of land for cultivation may be a problem.

Table 10. Farm size of the respondents.

Farm size (ha)	Participant		Non-participant	
	Frequency	Percentage	Frequency	Percentage
0.5 – 5	51	56.7	39	43.3
5.5 – 10	33	36.7	42	46.7
10.5 – 15	6	6.6	3	3.3
15.5 – 20	0	0.0	0	0.0

20.5 – 25	0	0.0	6	6.7
Total	90	100.0	90	100.0

4.4 Cropping Systems

The study revealed that about 73% of participants in the National Directorate of Employment and 90% of non-participants practised mixed cropping, while 27 and 10 percent of participants and non-participants respectively practiced sole cropping. Some of the respondents practised mixed cropping systems to averse risk in agricultural production.

Table 11. Distribution of respondents based on cropping systems

Class	Participant		Non-participant	
	Frequency	Percentage	Frequency	Percentage
Mixed	66	73.3	81	90.0
Sole	24	26.7	9	10.0
Total	90	100.0	90	100.0

4.5 Mode of Cultivation

Majority of the respondents both (National Directorate of Employment participants and non-participants) used manual labour for cultivation (93% and 80%, respectively), while only 7% and 20%, respectively used mechanized mode of cultivation (Table 12). This may be due to high cost of using mechanized method and the technicality involved in the operations, given the amount of loan that was given to the participants by the National Directorate of Employment.

Table 12: Mode of cultivation used by the respondents.

Mode of cultivation	Participant		Non-participant	
	Frequency	Percentage	Frequency	Percentage
Manual	84	93.3	72	80.0
Mechanical	6	6.7	18	20.0
Total	90	100.0	90	100.0

4.6 Costs of Inputs

4.6.1 Seed costs

Majority of respondents used local seeds obtained from the local markets, thus, the low cost of seeds. About 60% of both participants and non-participants spent not more than ₦1000 on seed, while the remaining respondents spent above ₦1000 on the seed (Table 13).

Table 13. Seed cost to the respondents

Seed cost (₦)	Participant		Non-participant	
	Frequency	Percentage	Frequency	Percentage
0001 – 1000	54	60.0	57	63.34
1001 – 2000	18	20.0	30	33.3
2001 – 3000	6	6.7	3	3.3
4001 – 5000	3	3.3	0	0.0
5001 – 6000	0	0.0	0	0.0
6001 – 7000	1	3.3	0	0.0
Total	90	100.0	90	100.0

4.6.2 Cost of labour

Labour is one of the most important factor of production. For the participants, about 60% spent nothing below ₦10,000 per year to pay for labour, this may be due to their age and small family size. This forced them to hire labour. Besides, their farm sizes are relatively small compared to

non-participants. Whereas the majority of non-participants (86%) spent above 20,000 on labour. This might be due to the fact that their farm size are bigger, by the way they uses family members for some farm practices. This can be clearly seen in Table 14.

Table 14. Labour cost in production

Labour cost (₦)	Participant		Non-participant	
	Frequency	Percentage	Frequency	Percentage
00001 – 10,000	54	60.0	42	46.7
10,001 – 20,000	33	36.7	36	40.0
20,001 – 30,000	3	3.3	3	3.3
30,001 – 40,000	0	0.0	0	0.0
40,001 – 50,000	0	0.0	9	10.0
Total	90	100.0	90	100.0

4.7 Output Value

Output value is a very important variable in this study to ascertain the contribution of National Directorate of Employment agricultural production programme in Katsina state as stated in objective 2. For both participants and non-participants of the programme, the output value of the majority of the respondents (80%) recorded output value of the range of ₦20,000 – ₦40,000. This shows that only about 20% of the respondents made profit after production season when compared with the total cost of production incurred as shown in Table 13.

Table 15. Output value (₦) of sorghum

Sorghum value (₦)	Participant		Non-participant	
	Frequency	Percentage	Frequency	Percentage
20,000 – 40,001	75	83.3	72	80.0
60,000 – 61,000	15	16.7	6	6.7
80,000 – 120,000	0	0.0	12	13.3
Total	90	100.0	90	100.0

4.8 Years of Experience in National Directorate of Employment Programme

Majority of the respondents (53%) had two year experience, while about 20% had 3 or 4 years experience with National Directorate of Employment agricultural programme. This result may not be unconnected with the fact that the duration of the loan was about 2 years. Thus majority of the farmers had about 2 years experience with National Directorate of Employment as seen in Table 16.

Table 16. Respondents experience with NDE programme

Year of experience	Participant	
	Frequency	Percentage
1	6	6.7
2	48	53.3
3	18	20.0
4	18	20.0
Total	90	100.0

4.9 NDE Loan

Provision of loan was one of the activities of the programme to help the participants to be self-reliant and to reduce the problem of unemployment by engaging the unemployed in agricultural production. There was a serious inadequacy in the amount of loan given to participants of the programme. From the data collected about sixty percent of the respondents received loan from National Directorate of Employment both in cash and in kind at the range of ₦15,000 - ₦21,000.

Table 17. NDE loan acquired by participants

Amount of loan (₦)	Participant	
	Frequency	Percentage
12,001 – 15,000	3	3.3
15,001 – 18,000	33	36.7
18,001 – 21,000	24	26.7
21,001 – 24,000	12	13.3
24,001 – 27,000	12	13.3
27,001 – 30,000	3	3.3
30,001 – 33,000	3	3.3
Total	90	100.0

4.9.1 Relevance of NDE agricultural programme

About 40% of the respondents claimed that they had increase in sorghum production through participation in the National Directorate of Employment programme; while about 13% claimed that they gained knowledge of new farming techniques. Majority believed that the programme was a source of employment. The programme also raised the

demand for hired labour, but 10% of the participants claimed not to have gained anything from N National Directorate of Employment agricultural production programme.

Table 18. Perception of the respondents on the benefits gained from NDE agricultural programme.

NDE's benefits	Participant	
	Frequency	Percentage
Increased sorghum production	36	40.0
Gained knowledge of new farming techniques	12	13.3
Became employer of labour	51	56.7
Did not benefit from the programme	9	10.0
Total	90	100.0

4.9.2 Loan procurement (Objective 4)

Participants encountered one or more problem(s) in loan procurement from National Directorate of Employment in the study area. The problems such as bureaucratic bottleneck, lack of proper extension services and staff intervention on loan procurement dominated the scene as reported by about 33% of the respondents. Only 13% complained of the problem in loan disbursement as a constraint, but 26% claimed not to encounter any problem of loan procurement. The problems outlined above resulted into inefficiency and ineffectiveness of the programme.

Table 19. Respondents NDE loan procurement problems

Loan procurement problem	Participant	
	Frequency	Percentage
Bureaucratic bottleneck in loan procurement	30	33.3
So much problem in loan disbursement	12	13.3
Lack of proper extension services	30	33.3
Staff intervention on loan procurement	30	33.3
Didn't encounter any problem	24	26.7

4.9.3 Loan disbursement

About 40% of the respondents reported to have encountered two major problems; delay in loan disbursement and inadequate or untimely supply and low profitability of agricultural production. About 26% complained to have encountered the problem of bureaucratic nature of loan disbursement, but only 20 per cent of the respondents did not encounter disbursement problem. The result expressed the problems encountered by the participants as stated in the objective 4 of the study.

Table 20. Respondent's loan disbursement problems

Loan disbursement problem	Frequency	Percentage
Delay in loan disbursement	30	40.0
Inadequate and untimely supply of inputs	30	40.0
Bureaucratic nature of loan	24	26.7
Didn't encounter any problem	18	20.0

4.9.4 NDE agricultural programme constraints (Objective 3)

About 70% of the respondents reported lack of adequate input at right time as a major problem of National Directorate of Employment agricultural

programme. This may not be unconnected with seasonal nature of agricultural production. Other problems militating against the respondents that constituted 20% were poor supervision by staff of National Directorate of Employment and inadequate technical guidance. However, none of the respondents claimed that he/she was satisfied with National Directorate of Employment agricultural programme.

Table 21. Respondents distribution based on constraints on NDE agricultural progrmame

Constraints of NDE's participants	Frequency	Percentage
Poor supervision of NDE staff	18	20.0
Inadequate technical guidance	18	20.0
Lack of adequate input at right time	63	70.0

4.10 Hypothesis Testing

The hypothesis that there is no significant difference in sorghum output of participants and non-participants of agricultural production programme of National Directorate of Employment was rejected. The T-Test computed shows that there is a significant difference to sorghum output of participants and non-participants of agricultural production programme of National Directorate of Employment in the study area at 5% level of significance.

Table 22. Sorghum output of participants and non-participants (Objective 2)

Variables	Value
Mean sorghum output of participants	1121.0
Mean sorghum output of non-participants	760.40
Variance of participants	784397.1882
Variance of non-participants	126786.557

Standard deviation of participants	885.66204
Standard deviation of non-participants	356.07105
T-Calculated	2.0691
Critical value (T = table value)	1.96
Number of participants = Number of non-participants	90
Level of significance	0.05

Source: Field survey, 2001.

CHAPTER 5

SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 Summary

National Directorate of Employment agricultural production programme of providing employment to Nigerian citizens is implemented through provision of loans to participants, which is surrounded by a lot of problems. The constraints to the respondents on loan procurement include bureaucratic bottleneck, lack of extension services and staff supervision. These problems have contributed greatly to making it very difficult for National Directorate of Employment to achieve its numerous objectives.

To access the contribution of National Directorate of Employment agricultural programme towards increasing food production in the State, two categories of respondents were used for the study. These were participants in National Directorate of Employment programme and non-participants who engaged in sorghum production in the State. Result of T-Test shows that there is significant difference between sorghum output of participant and non-participants of agricultural production programme of National Directorate of Employment in the study area at 5% level of significance.

The National Directorate of Employment experienced a lot of problems in trying to achieve its objectives of agricultural programme. The major problems were loan default, untimely and delay in loan disbursement; lack of mobility for the project inspection and lack of agricultural machineries

by the Directorate. Also facilities for running the training school were not available. For this reason there was no training programme for the participants.

Participants of the programme also faced certain constraints. About 70% of respondents experienced lack of adequate inputs at right time, thereby making it difficult to meet input demand for the agricultural production. About 20% of the respondents reported poor supervision. In general, the participants were of the opinion that their participation in National Directorate of Employment agricultural programme had contributed on the sorghum production to certain extent. However, they were not satisfied with the way the programme was executed.

5.2 Conclusions

The findings indicated that the activities of National Directorate of Employment had been poorly carried out in this study area. Though the objectives of this programme was to alleviate the problems of unemployment and of course to address the problem of food inadequacy. Most achievements were paper works rather than real implementation. Another crucial issue is that of the growing population of graduates and school leavers, there was no likelihood that the Directorate could meet up with the rising unemployment. Despite all the shortcomings, participation in agricultural production programme of National Directorate of Employment has contributed to increase in production of sorghum in the study area.

5.3 Recommendations

Based on the findings, the following recommendations were made:

1. Majority of the respondents said that the disbursement of loans do take much bureaucratic procedure, National Directorate of Employment should trim down protocols to accommodate respondents that incur much time and costs of transactions.
2. The respondents lamented about the untimely supply of input. Therefore the Directorate should consistently give adequate farm inputs to participants at appropriate time.
3. The Directorate needs to mobilize their staff through training and other intensive workshops to improve staff supervisory ability.
4. Since road network is poor in rural areas of the state, National Directorate of Employment should therefore ensure that such activity like public work programme that is centred on road construction and building of houses should be extended to the state. If roads are improved upon, accessibility becomes easier for transactions.

REFERENCES

Abdullahi, A. (1981). "Problems and propsects of Green Revolution for Agricultural and Rural Development of Nigeria. Technical and Environmental Perspectives In: G.O.I. Abalu *et al*. (eds.). *The Green Revolution in Nigeria*. Proceedings of a National Seminar, 21-24 September, AERS/ABU, Zaria, pp. 10-14.

Abua, Okocha (1984). "Our ailing economy." Trust Magazine, April, p. 9.

Adejumo, O. (1987). "We will not fold our hands." National Concord Newspaper, December 5, p.4.

Alao, S.A. (1980). Understanding small Farmers' Adoption Behaviour: The Nigerian Experience. Inaugural Lecture Series, University of Ife.

Amartya, S. (1979). *Employment Technology and Development*., Lagos, Nigeria, Canival Press .

Anonymous (1996). NDE agricultural programmes guideline on graduates agricultural employment scheme, January 1996, Lagos, Nigeria.

Anonymous (1979). Notes on cereal improvement programme. Cropping Scheme Meetings, IAR/ABU, Zaria, Nigeria.

Ariyo, J.A. (1989). "The role of women in agricultural development process." *Development Studies Review*. Center for Development in Nigeria. A paper presented at the First Regional Workshop on Rural Development (sponsored by International Centre for Development Studies) Denvev, Colorado. pp. 50-52.

Arnon, .I. (1972). "Crops production in dry regions". Systematic treatment of the principal crops. Vol. II. Leonard Hill, London.

Atala, T.K. (1980). Factors affecting adoption of agricultural innovations, usage of living in two Nigerian villages. Unpublished M.Sc. Thesis, Iowa State University, Ames.

Aziz, S. (1978). Rural Development: Learning from China, London: Macmillan Press Ltd.

Berry, B.J.L. (1972). "Hierarchical diffusion the basis of development filtering and spread in system of cities." *Growth Centres in Regional Economic Development*. New York, USA: The Free Press.

Bruton, D. (1983). *Economic Development and Labour Use*. Iowa State, USA:: University Press. 350pp.

C.B.N. (2000). Changing structure of the Nigerian economy and implications for development. CBN Publication, August, 2000.

Combs, P.H. (1980). "What it will take to help the rural poor" In: Combs, P.H. (ed.). Meeting Basic Needs of the Rural Poor. The Integrated Community Approach. London: Combs: Pergamon Press, pp. 1-41.

Davis, K. (1949). *Human Society*. New York: The Macmillan Company.

Debrah, H. (1993). "Sorghum in West Africa." In: Sorghum and Millets Commodity and Research Environments. ICRISAT, India. pp.15.

Dogget, H. (1965). "The development of cultivated sorghum." In: Essays on Crop Plant Evaluation. J.B. Hutchinson (ed.), London: Cambridge University Press.

Dogget, H. (1970). Sorghum. Longmans, London: Greens and Co. Ltd.

Egharevba, P.N. (1979). Agronomic practices for improved sorghum and millet production. Samaru Miscellaneous paper 90, Institute for Agricultural Research, Samaru, Nigeria.

Ekong, E. Ekong (1983). "Farm size Agricultural Rural Development in Nigeria." Agricultural Administration 14(3): 169-183.

Ekong, E. Ekong (1988). An Introduction to Rural Sociology. Uyo, Nigeria: Done Educational Publishers.

Etuk, Imo A. (1986). Rural Development Authorities in Agricultural Development: A Case Study of Cross River Basin and Rural Development Authority. An Unpublished B.Sc. Thesis, Department of Agricultural Economics and Rural Sociology, Ahmadu Bello University, Zaria.

Fajimade, T.A. (1979). Adoption of improved rice varieties and agronomic practices in Ilesha Division, Oyo State, Nigeria: University Press.

Famoriyo, S. "Improved Agricultural Credit in Nigeria". *Agricultural Administration Agricultural Administration,*7(3): 21-28.

Hansen, N. (1968). French Regional Planning, Bombay, India: Indiana University Press.

Hulsa, J.H., Laing, E.M. and O.E. Pearson (1980). Sorghum and millet: Their composition and nutritive value. London, UK: Academic Press.

Idisi, P.O. and B. Oshinebo (1998). Practical Guide to Thesis and Project Work., Kaduna, Nigeria: Joyce Randy and Publishers Company.

Kajie, M. (1989). "Brighter tomorrow for the jobless." Punch Newspaper, June 7, p. 11.

Kassam, A.H. (1976). 'Sorghum'. In: Crops of the West Africa Semi-Arid Tropics. ICRISAT, Information Services. pp. 10.

Kidd, David W. (1968). Factors affecting farmers' response to extension in the Western State of Nigeria. CSNRD 30, East Lansing, U.S.A: Michigan State University Press.

Lawson, O. (1982). "We never had it so bad". Drum Monthly Magazine, June, p.7.

Lere, U.J. (1975). The design of rural development. Lesson from Africa, Baltimore: John Hopkins University Press.

Lionberger, H.F. (1960). Adoption of new ideas and practices. Ames, Iowa: Iowa State University Press.

Mamman, T. (1994). The Impact of Directorate of Food, Roads and Rural Infrastructures (DFRRI) on Farmers Activities: A case Study of Inukari Local Government Area of Taraba State. An Unpublished B.Sc. Thesis, Department of Agricultural Economics and Rural Sociology, Ahmadu Bello University, Zaria.

Martin, J.H., Leonard, W.H. and D.L. Stamp (1976). Principle of field crop production. 3rd edition, New York, USA: Macmillan Publishing Co. Inc.

Mijindadi, N.B. (1985). Nigerian Agriculture – Past Experience and Lessons for the Fifth National Development Plan: Keynote address presented at the 19th Biennial Week Celebration of the Nigerian Association of Agricultural Students, Ahmadu Bello University, Zaria.

Mobayo, Wale T. (1987). Impact of public agricultural credit programmes on the farm income of small farmers: A case study of Oyi Local Government Area of Kwara State. An unpublished M.Sc. Thesis, Department of Agricultural Economics and Rural Sociology, Ahmadu Bello University,, Zaria.

Mobogunje, A.L. (1986). Organizing Nigeria's socio-economy for development. A public lecture delivered on the occasion of 29th Annual Conference of Nigerian Geographical Association held in A.B.U., Zaria.

NAERLS (1997). Prospects and problems of the 1997 cropping season. NAERLS/APMEU, Kaduna.

National Directorate of Employment (1992). Annual Report. NDE Headquarters, Lagos, Nigeria.

National Directorate of Employment (1993). Annual Report, NDE Headquarters, Lagos, Nigeria.

National Directorate of Employment (1994). Annual Report, NDE Headquarters, Lagos, Nigeria.

National Directorate of Employment (1995). Annual Report. NDE Headquarters, Lagos, Nigeria.

National Directorate of Employment (1996).Annual Report. NDE Headquarters, Lagos, Nigeria.

Oke, O.L. (1976). "The potential of millet and sorghum as food." In: Proceedings of a Symposium on Sorghum and Millet for Human Food. International Association for Cereal Chemists. pp. 23.

Oniyide, J. (1991). "NDE pays apprentice." New Nigerian, April 9, p.7.

Olatunde, F. (1991). *Waste to Wealth: The Nigerian Experience a Pragmatic Approach to Combating Unemployment in the Third World*, Eroko, Lagos, Nigeria: Emaphine Publishers.

Olagbade, J. (1994). *Critical Approach to Employment*. Lagos, Nigeria: Jicky Press.

Olayemi, J.K. and Oni, S.A. (1970). "Cost and returns in peasant cocoa production. A case study of Western Nigeria". *Bulletin of Rural Economics and Sociology*, 6(2) .20.

Perrut, F. (1964). Note Sur al Motion de pole de Groussance L' Economic du xxime Siecle 2d edn (Presses University taires de France).

Preil, A. (1976). The inter urban transmission of growth in advanced economies. Empirical Findings versus Regional Planning Assumption, Laxenburg, Australia. International Institute for Applied System Analysis.

Sam, Smith (1987). “Rural Economy”. Newswatch Magazine, October 5, p. 9.

Seers, D. (1981). Dependency Theory. London: Frances Printer.

Seers, D. (1980). European Studies in Development, New Trends in European Development Studies. Edited by Jacques De Bandt, Peter Mandi and Dudley Seers. New York, USA: Carnival Press.

Stober, W.B. and D.R.F. Taylor (eds.) (1981). Development from Below. The Bottom-Up and Periphery – Inward Development Paradigm from Above or Below. The Dialectics of Regional Planning in Development Countries. New York, USA: John Wiley and Sons Ltd.

Todaro, M. (1973). Economic Development in the Third World, London: Longman.

APPENDIX I

NDE WORK PROCEDURE

1. How many participants do you have for NDE Agricultural Production Programme in Katsina State? .....

2. When did the NDE Programme start in the State?.....

3. Specify the number of participants in each agricultural programme:

   (i) Livestock production .....
   (ii) Crop production.....

4. How many graduates participated in the programme, specify the year

   1991 .....
   1992 .....
   1993 .....
   1994 .....
   1995 .....
   1996 .....
   1997 .....

5. How many school leavers participated in the programme, specify the year

   1991 .....
   1992 .....
   1993 .....
   1994 .....
   1995 .....
   1996 .....
   1997 .....

6. How much does NDE give as loan for agricultural production programme?

   Graduates .....
   School leavers

7. Do you provide inputs to the participants? Yes ( ) No ( )

	Units	**Cost**
1.	.....	.....
2.	.....	.....
3.	.....	.....

8. What do you take as collateral for loan? .....

9. What is the mode of disbursement?.....

10. What is the mode of repayment and for how long?.....

11. What is the rate of defaulters? .....

12. What action do you take on defaulters?.....

.....

13. What are the problems, the NDE encountered with the participants?

    1. .....
    2. .....
    3. .....
    4. .....

14. What are the general problems encountered in running NDE agricultural production programme for graduates and school leavers?

    1. .....
    2. .....
    3. .....
    4. .....

15. How do you go about solving your problems? .....
    .....
    .....

16. What have you achieved as at now .....
    .....
    .....

17. What suggestions would you give in improving the programme and increasing production level in general? .....
    .....
    .....

APPENDIX II

PARTICIPANTS AND NON-PARTICIPANTS OF NDE
AGRICULTURAL PRODUCTION PROGRAMME

SECTION A

BACKGROUND INFORMATION

1. Name: .....

2. Age: .....

3. Sex: Male ( ) Female ( )

4. Local Government Area: .....

5. Household Size: .....

6. How long have you been involved in sorghum production?.....

7. How did you acquire land for production?

   (a) Inheritance ( )
   (b) Lease ( )
   (c) Purchase ( )
   (d) Others (specify) .....

8. If (b), how much does it cost you per hectare in a Year? .....

9. What type of education have you?

   (a) Primary education..... ( )
   (b) Secondary education..... ( )
   (c) Tertiary education..... ( )
   (d) Adult education ..... ( )
   (e) Arabic education..... ( )
   (f) Have not been to school..... ( )

10. What other crops apart from sorghum do you produce?.....
    .....

11. Do you participate in NDE agricultural programme? .....

12. If yes, how did you know about NDE agricultural production programme?

    .....

13. For how long have you been with NDE agricultural programme?.....

SECTION B:

CONTRIBUTION OF NDE AGRICULTURAL PRODUCTION PROGRAMME TO AGRICULTURAL PRODUCTION

I. LOAN

14. How much were you given in cash by NDE? .....

15. What items in kind were you given by NDE

S/No.		Unit	

16. What was the nature of disbursement? .....

17. What was the duration of the loan? .....

18. What was the nature of repayment .....

19. For how long were you expected to repay back the loan? .....

20. Have you been regular in the repayment of the loan? .....

21. Do you obtain loan from any other source? Yes ( ) No ( )

    (a) Banks
    (b) Money lenders
    (c) Friends/Relatives
    (d) Others (specify) .....

22. If yes, specify the amount: .....

II. INPUTS

23. Seed quality: .....

24. Source of seed: .....

25. Unit cost/mudu (₦): .....

26. Farm size: .....

27. Did you mix sorghum with other crops? No ( ) Yes ( )
28. If Yes, (specify):

29. What type of chemical do you use? State the cost per unit of each chemical used? ...

S/No.		Unit	

30. How did you prepare the land?

(a) Manually ( )
(b) Mechanically using tractor ( )
(c) Animal traction ( )

31. If manually, how many people and days were used for the following:

	No. of people	Days
Land preparation		
Fertilizer application		
Weeding		
Harvesting		

32. What type of fertilizer did you use?

(a) Organic ( )
(b) Inorganic ( )
(c) Both (a) and (b) ( )
(d) None ( )

33. If organic, how many bags/hectare used? .....

34. Unit cost/bag (₦).....

35. III. Output

Crop	Output	Cost/bag
Sorghum		
Sorghum/cowpea		
Sorghum/millet		
Sorghum/groundnut		
Sorghum/cotton		

iv. TRAINING AND EXTENSION

36. Did you undergo any training organized by the NDE?

(a) Yes ( )
(b) No ( )

37. If Yes state the duration.....

38. If yes, which of the following training did you undergo?

(a) Record keeping ( )

(b) Agronomic and farm management ( )
(c) Post harvest handling of field crops ( )
(d) Marketing of farm produce ( )

39. Did you benefit from NDE agricultural programme?

(a) Yes ( )
(b) No ( )

40. If Yes, in which way(s)?

(a) Increase production ( )
(b) Gain knowledge of new farming techniques ( )
(c) Making you employer of labour ( )
(d) Others (specify) .....

41. What are the constraints you encountered in carrying out some of the practices introduced by NDE?

(a) Poor supervision by NDE staff
(b) Inadequate technique guidance
(c) Lack of adequate inputs at the right time
(d) Others (specify) .....

SECTION C:

PROBLEMS EXPERIENCED BY NDE PARTICIPANTS

42. What are the problems encountered with NDE in terms of loan disbursement?

(a) Delay in loan disbursement ( )
(b) Inadequate and untimely supply of inputs ( )
(c) Bureaucratic nature of the loan ( )
(e) Others (specify) .....

43. What are the problems encountered with NDE in terms of loan procurement?

(a) Bureaucratic bottleneck in loan procurement ( )
(b) So much protocols in loan disbursement ( )
(c) Lack of proper extension services ( )
(d) Staff intervention on loan procurement ( )
(f) Others (specify) .....

SECTION D: SUGGESTIONS

44. What are the possible solutions for solving NDE encountered problems?

(a) .....

(b) .....

(c) .....

(d) .....

45. What ways can NDE agricultural production programme be improved?

.....

.....

.....