IMPACT OF COMMUNITY BASED AGRICULTURE AND RURAL DEVELOPMENT PROJECT ON PARTICIPANTS INCOME AND OUTPUT IN KADUNA STATE, NIGERIA

BY

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A DISSERTATION SUBMITTED TO THE SCHOOL OF POSTGRADUATE STUDIES, AHMADU BELLO UNIVERSITY ZARIA, IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE AWARD OF MASTER OF SCIENCE DEGREE IN AGRICULTURAL EXTENSION AND RURAL SOCIOLOGY

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DECLARATION

I hereby declare that this dissertation titled **"Impact of Community Based Agriculture and Rural Development Project onParticipants Income and Output in Kaduna State, Nigeria"**was written by me and it is a record of my research work. No part of this work has been presented in any previous application for another Degree or Diploma in this or any other institution. All borrowed informationhave been duly acknowledged in the text and a list of references provided.

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CERTIFICATION

This thesis titled **"Impact of Community Based Agriculture and Rural Development Project onParticipants Income and Output in Kaduna State, Nigeria"** by JibrilAbdullahiATIKU, meets the regulations governing the award of degree of Master of Science in Agricultural Extension and Rural Sociology of the Ahmadu Bello University, Zaria and is approved for its contribution to knowledge and literary presentation.

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DEDICATION

This work is dedicated to my late mother Hajia Maryam Daud whom I most admire and whose wisdom lifted me up.

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In the name of Allah most gracious and the Merciful, Master of the day of resurrection. From him we came and on to him we shall return, may peace and blessing be upon our noble prophet Muhammad (SAW), his family and companions. I must therefore, be grateful to Allah for having the protection, strength, wisdom and guidance throughout the period of this thesis work.

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TABLE OF CONTENTS

Content **Page**

TITLE PAGE……..i

DECLARATION…….….ii

CERTIFICATION……..……...iii

DEDICATION…….....iv

ACKNOWLEDGEMENTS…….……..v

TABLE OF CONTENTS……vi

LIST OF TABLES…….…..……..x

LIST OF FIGURES……..……...xii

LIST OF APPENDICES……..…..……xiii

LIST OF ACRONYMS……..xiv

ABSTRACT……..…….xv

CHAPTER ONE

INTRODUCTION.....1

1.1 Background of the Study……..…..……1

1.2 Statement of the Problem…….…….…….3

1.3 Objectives of the Study…….…..…….....4

1.4 Justification for the Study……..…….…….…..5

1.5 Hypotheses……..……..…….6

CHAPTER TWO

LITERATURE REVIEW…….…….....7

2.1 Concept of Impact……..……..……..7

2.2 Empirical Studies of Impact…….....……...8

2.3 Rationale for IFAD Operations in Nigeria……...10

2.3.1 Impact of IFAD funded operations…….....11

2.3.2 Socio-economic characteristics of farmers……..……12

2.3.3 Previous findings on socio-economic characteristics of beneficiaries ofagricultural and rural development programme……..…….....13

2.4 AFDB – CBARDP Activities……..……....13

2.5 Perspectives on Rural Development……..……..14

2.5.1 Constraints of rural development programmes in Nigeria……..16

2.5.2 Community development…….……17

2.6 Theoretical Framework……..……..18

2.6.1 Functionalist theory……18

2.6.2 Participation Concept……...……19

2.7 Conceptual Model……..……....……..21

CHAPTER THREE

METHODOLOGY……..24

3.1 Study Area……..…….…….....24

3.2 Sampling Procedure and Sample Size…….„……..……26

3.3 Method of Data Collection…..……26

3.4 Analytical Techniques……..…….....27

3.4.1 Descriptive Statistics…….……..27

3.4.2 Inferential Statistics (T-test)…….…….....27

3.4.3 Chow Test……..…….…….28

CHAPTER FOUR

RESULTS AND DISCUSSION……..……30

4.1 Socio-Economic Characteristics of Respondents….. ……..……30

4.1.1 Sex of respondents……..……..30

4.1.2 Marital status of respondents……..30

4.1.3 Age of respondents…….……....31

4.1.4 Income of respondents…….....31

4.1.5 Household size of respondents……....31

4.1.6 Level of education of respondents……...32

4.1.7 Primary occupation of respondents…….....33

4.2 Description of the Project Activities……35

4.3 Impact of CBARDP project on income of farmers…….……..…..39

4.4 Impact of CBARDP project on output of farmers……...41

4.4.1 Impact of CBARDP on maize output…….……41

4.4.2 Impact of CBARDP on rice output……..43

4.4.3 Impact of CBARDP on cowpea output……..……45

4.5 Constraints faced by the Respondents in CBARDP……51

CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATION……53

5.1 Summary……....53

5.2 Conclusion……54

5.3Contribution to knowledge……55

5.4Recommendations ……55

5.5Suggestions for further studies……..56

REFERENCES…….....57

LIST OF TABLES

Tables **Page**

Table 3.1: Distribution of respondents by Local Government Areas……..….26

Table 4.1: Socio-economic Characteristics of Farmers…….....34

Table 4.2: Activities of the project in the study areas……...…37

Table 4.3: Distribution of livestock income of CBARDP on farmers……..…40

Table 4.4: Impact of CBARDP project on income of farmers…….……41

Table 4.5: Distribution of maize output of Farmers …….…..**.....**42

Table 4.6: Impact of CBARDP project on output of maize farmers…….**....**43

Table 4.7: Distribution of rice output of farmers…….…..**.....**44

Table 4.8: Impact of CBARDP project on output of rice farmers…….…...45

Table 4.9: Distribution of cowpea output of farmers…….……**...**46

Table 4.10: Impact of CBARDP project on output of cowpeafarmers…….…….47

Table 4.11: Result of t-test on significant differences between income of participants and non-participants.…..**.....**48

Table 4.12: The result of t-test showing significant differences between maize output of participant and non-participant…….……**...**49

Table 4.13: The result of t-test showing significant difference between farm output of rice participant and non-participant farmers……..……50

Table 4.14: The result of t-test showing significant difference between output of participant and non-participant cowpea farmers….……..51

Table 4.15: Constraint faced by Respondents…...…….……52

LIST OF FIGURES

Figures **Pages**

Figure2.1: Model of Impact of Community Based Agriculture and Rural Development Project on Participants…..…….23

Figure 3.1: Map of Kaduna State showing the study Areas……..25

LIST OF APPENDICES

Appendix I: Research Questionnaire A (Participants)…….……62

Appendix II: Research Questionnaire B (Non-Participants)……..…...72

LIST OF ACRONYMS

CBARDP Community Based Agriculture and Rural Development Project

GDP Gross Domestic Product

FOS Federal Office of Statistics

FAO Food and Agricultural Organization

AfDBAfrican Development Bank

NGO Non Governmental Organization

IFAD International Fund for Agricultural Development

CDD Community Driven Development

NFDP National Fadama Development Project

KADP Kaduna Agricultural Development Project

NAPEP National Poverty Eradication Project

MVP Millennium Village Project

CPE Country Programme Evaluation

HD Human Development Index

UNDP United Nations Development Programme

PI Poverty Index

CNRMP Community Based Natural Resources Management Programme

RUFIN Rural Financial Institution

RUMHDP Rural Micro Enterprises Development Programme

RVA Rural Village Areas

PIMProject Implementations Manual

ABSTRACT

This study was designed to assess the Impact of Community Based Agriculture and Rural Development Project (CBARDP) on the participantsIncome and Output in Kaduna State, Nigeria.The objectives of the study were to: described the socio-economic characteristics of the respondents; described the basic activities provided by the project and determined the impact of the project on the participants' income and output, assess the spillover effects of the project on the non-participating farmers and the constraints encountered by the project participants. A multi-stage sampling technique was employed to select a sample size of 185 respondents from a sample frame of 1852. A structured questionnaire was used to elicit the primary data. Descriptive statistics, t-test and chow test were utilized for the analyses. The findings revealed that, majority (70%) of the participating farmers were females and (85%) of the non-participating farmers were also females with average age of 41 years and 91% were married, having a household size between 6-10 persons with 32% of thenon-participating farmers having an educational attainment of primary and 27% of the participating farmers attended post secondary school. Ten (10) activities were identified among the participating farmers of the project in the study area. The results from the Chow test analysis revealed that CBARDP had a positive impact on participants income($F=1.98$) and output (2.17)at $p<0.05$ level. The various constraints encountered by the project participants were: inadequate production inputs, inadequate infrastructure, inadequate extension contact, lack of involvement of farmers in planning, poor co-operation among the participants and the period spent for the project implementation was small. It was therefore, concluded that CBARDP had positive impact on the participants income and output in Kaduna State. It was recommended that, the project should be scale out to other non-benefitting Local Government Areas of the State. Participants should be encouraged to form viable co-operative group. Project implementers should adopt the use of community driven development projects (CDD). Finally the ratio between agricultural extension workers to farmers should be balanced by government and non governmental organizations that are unto extension delivery for effective dissemination of information.

CHAPTER ONE

INTRODUCTION

1.1 Background to the Study

Agriculture constitutes one of the most important sectors of Nigeria's economy. The sector is particularly important in terms of generating employment and contribution to Gross Domestic Product (GDP) and export revenue earnings. It contributes 22% to GDP, equivalent to $112.12 billion (₦18,513 billion Naira at ₦165 per dollar) (Christie, 2014). In Nigeria, an estimated 65% of the population resides in the rural areas where agriculture is the predominant occupation(Federal Office of Statistics, 1999). It is estimated that about 70% of the rural population are engaged in agriculture (Federal Office of Statistics, 1999). For more than two decades, the agricultural sector of the Nigerian economy has continued to perform below expectation despite the huge sum of money being allocated to the sector in each year's budget (Onyeahialam, 2002). In 2002, about ₦9.874 billion was mapped out for the sector (Obasanjo, 2002). Also during the same year, 72 million dollars donated by Food and Agricultural Organization (FAO) were distributed to the 36 States of the Federation in addition to the year's allocation (Iheagu, 2002). According to Iheagu (2002), the money cannot be said to have been justifiably used, rather, what transpire is the prevalent poor attitude of the government to the execution of agricultural programmes which is always a top-bottom approach system.

Previously, government embarked on various reform programmes with a view to increase food production and processing both for home consumption and export. The reform programmes introduced which among others include the: Farm Settlement Scheme established in 1960, National Accelerated Food Production Programme

1972,Agricultural Development Projects 1972, Nigerian Agricultural and Co-operative Bank 1973, Operation Feed the Nation 1976, River Basin Development Authorities 1976, Directorate of Food, Roads and Rural Infrastructures 1986, National Directorate of Employment 1987, National Agricultural Land Development Authority 1988, Food Security and Poverty Alleviation Programme 1999. All these programmes have significant merit, but the facts remain that none singly or collectively have addressed the felt needs of the farmers to any significant and sustainable extent (Ladele, 1990; Idachaba, 2000 and Ijere, 1992).

Ijere (1988) contended that, for rural development programme to succeed, one of its major concerns should be to reflect the realities, needs and aspirations of the rural people. Similarly, Olukosi (2002) indicated that, for any development project to succeed there is need to not only involve the community on development projects in bottom-up manner but, empowering them to initiate projects based on their felt needs and priorities, plan by themselves, implement by themselves with outsiders as facilitators. Participation of the rural people is thus, considered a powerful instrument for meeting this concern.

Consequently on the forgoing situation in the country, the Federal Government of Nigeria prepared and adopted a new National Rural Development Strategy in 2001,PIM(2006). The strategy aimed at improving livelihood and food security through a process of Community Based Agriculture and Rural Development Project (CBARDP). The strategy called for a community driven development approach that ensures the active participation of beneficiaries and Local Government at all levels of decision making. The project counterpart funds were from the African Development Bank (AfDB) contributing 81%, the Federal Government of Nigeria 3%, five participating states: Kaduna, Bauchi, Adamawa, Gombe and Kwara with each contributing 6%

respectively to their own state projects. Other contributors of the funds are the selected nine Local Government Areas from each State, contributing 9% each while the project sites (participants) 1%. Their intention is to assist the agricultural and rural development sector of Nigeria by funding Community Based Agriculture and Rural Development Project (CBARDP).

1.2 Problem Statement

Despite the high potential for increasing agricultural production in the country by expanding the area under cultivation and improving output for existing area, the country has failed to produce enough food for meeting her citizen's needs (Inusa, 2011). The decline in production of food affects the whole of agricultural sector. One of the major causes of the unsatisfactory situation in the agricultural sector is the traditional system of agricultural production. This is attributed to poor production technologies used by the farmers coupled with inadequate input supply, poor access to rural infrastructure which stand as a big hindrance facing Nigeria's agriculture (Inusa, 2011).

A lot of money has been spent by the African Development Bank, Federal Government of Nigeria, Kaduna State and the nine participating Local Governments in the participating communities to ensure that the participants utilized resources more efficiently and have access to infrastructure in order to improve their output and income. CBARDPs project has commenced since 2006, information on the impact of this project on the participating farmers in the study area needs to be obtained. Though, CBARDP may have carried out impact assessment study of the project, there is the need for such information from an external source. It is important to look at the project implementation from the inception to date. This is because since the inception of the CBARDP project, there is little or no much study of this nature that has been conducted. Hence, the study determined the impact of the project towards participants output and

also the extent to which the project contributed to improveparticipants income in Zaria and Igabi Local Government Areas of Kaduna State.This study therefore, provides answers to the following research questions:

i. What are the socio-economic characteristics of the participating farmers and non-participating farmers

ii. What are the activities of the CBARDP project among participating farmers in the study area?

iii. What is the impact of CBARDP on the income of participating farmers and non-participating farmers?

iv. What is the output of the major crops of participants and non-participating farmers?

v. What are the spillover effects of the CBARDP on the non-participating farmers?

vi. What are the constraints encountered by the participants of the project in achieving their goals?

1.3 Objectives of the Study

The broad objective of the study is to assess the impact of Community Based Agriculture and Rural Development Project (CBARDP) on the participants income andoutput.The specific objectives were to:

i. describe the socio-economic characteristics of the participating farmers and the non-participating farmers.

ii. describe the activities of the CBARDP among participating farmers in the study area

iii. determine the impact of CBARDP on the income of participating farmers and non-participating farmers in the study area.

iv. determine the output of the major crops ofparticipantsand non-participating farmers in the study area.

v. assess the spillover effects of CBARDP on the non-participating farmers.

vi. identify the constraints encountered by the project participants.

1.4 Justification of the Study

Successive Government in Nigeria has recognized the importance of agricultural extension services to the survival of the small-scale farmers in particular and agricultural development in general. Thus various Agricultural Development Programmes have evolved with the aim of modernizing and improving the farmers technical knowledge and skills for greater output and higher standard of living (Adekoya, *et al*. 2011).

The main concern of this study is to assess the impact of the project on the output and income of the participants in the study area. This assessment will help us understand how the project has helped or improved thefarmers level in terms of output and income, as well as the differences that exist between the participants and non-participants. The findings of this study will provide useful and significant information in agricultural sector. It is expected that the finding will be useful for the development of a new thesis, thus increasing available literature in agricultural research in Nigeria. Finally, the outcome of the research provides viable information for the public including Non-Governmental Organization (NGOs) wishing to sponsor programme to improve the output and income of farmers.

1.5 Hypotheses

i. There is no significant difference between the income of participating farmers and non-participating farmers in the study areas.

ii. There is no significant difference between the maizeoutput of the participantsandnon-participants in the study areas.

iii. There is no significant difference between the rice output of the participants and non-participants in the study areas.

iv. There is no significant difference between the cowpea output of the participants and non-participants in the study areas.

CHAPTER TWO

LITERATURE REVIEW

2.1 Concept of Impact

Impact according toOmilola(2009) can be broadly defined as target attainment of long term economic, social and environmental effects resulting from research findings. Similarly, Sangingaet *al*.(1999) stated that impact analysis deals with the investigation of the changes that occurred or likely to occur on the people's life as a result of a programme. They further stress that, impact assessment tries to find out how far the introduction of technology has been successful in meeting the socio-economic objectives and how well agricultural technologies have satisfied the needs and priorities of household and other units in the target population. It is a special form of evaluation that deals with the effect of intervention programme output on the target beneficiaries. Thus, impact of a programme can be seen in relation to what services actually do to people who receive them. In the same manner,Lunsdaine and Hilton (1975) suggested that programmes should be assessed considering the desirability of the goals or outcome sought and the extent to which the goals are furthered by demonstrable effect. Alene*et al*. (2006) therefore are of the opinion that, impact studies is of great importance in agriculture and rural development researches because, it is used to identify alternative technologies that would address the major production constraints while at the same time taking into consideration farmers preferences and farming conditions.

From the foregoing, Gilbert *et al.* (1975) observed that, social intervention may have more than one goal, which may affect the choice of criteria in assessing impact. Under these circumstances of multiple goals, it is desirable to use more than one outcome as

a measure of impact. For instance, the overall objective of IFAD-CBARDP development programme is to promote the adoption of Community Driven Development (CDD) Approach in solving poverty, land degradation and agricultural output in the programmearea.

It should be noted that, in conducting impact assessment, researchers often use "with and without" impact method, while others use the "before" and "after" method. The "with and without" approach to impact study involves the study of population, villages or communities that benefitted or did not benefit from the execution of a project. Manyong*etal.* (2001) opined that, impact assessment of agricultural development projects is a continuous process and therefore being a process, it is better conceptualized to use the before and after impact assessment approach. For the purpose of this research, "withand without" approach was used. This is because using the approach may likely give much proper assessment on the impact of IFAD-CBARDP on rural livelihood in the study area.

2.2 Empirical Studies of Impact of Development Projects.

Various researches have been conducted on the study of impact and other related impact assessment studies. A research carried out by Simonyan and Omolehin (2012) on "Analysis of Impact of Fadama II Project on Beneficiary Farmers Income in Kaduna State: A Double Difference Method Approach" revealed that, during Fadama II project, the income of the beneficiary farmers increased significantly more than before the project and also more than the non-beneficiaries" income. Double difference analysis result further proved the fact that, the increase in income realized by the beneficiary farmers was attributed to their participation in Fadama II project based on the positive mean income value obtained which was significant at $P< 0.1$ level of probability. The study recommends

intensive advisory services by the KADP Fadama II project on resource allocation and utilization and other means of increasing farmers' beneficiary income further.

Similarly, a research was carried out by Kudi*et al.* (2008) on the Analysis of the Impact of National Fadama Development Project II (NFDP II) in Alleviating Poverty among Farmers in Giwa Local Government Area of Kaduna State, Nigeria. The findings revealed that, the efficiencies were positively and significantly correlated with years of irrigation farming, number of visits by extension agents, level of education, household size and ownership of water pump. The findings of the study therefore revealed that Fadama Development Project II had positive impact on the participating farmers in GiwaLocal Government Area. The programme had also increased the income of the participants, enhanced their access to farm inputs at subsidized rate and increased training and knowledge and thus, had the potential for alleviating rural poverty.

Furthermore, research on impact was carried out by Agbiokoro (2010) on the Impact of National Poverty Eradication Programme (NAPEP) on Economic Development of Nigeria. The study revealed that while the awareness level of NAPEP and her programmes were successful, the implementation level remained very minimal; NAPEP helped in improving the standard of living of Nigerians in the rural areas. Most people believe that the operations of NAPEP could boost economic development in Nigeria. The report concluded that notwithstanding the problems encountered by previous poverty eradication programmes in Nigeria, the National Poverty Eradication Programme(NAPEP) still had impacted significantly on the economic development of Nigeria.

A study conducted by Othman (2006) on the impact of Community Based Organizations on Rural Development in Kano State, Nigeria revealed that

Community Based Organizations played a key role in the provision of infrastructure such as feeder road rehabilitation, provision of water for domestic purposes, building of class rooms and other social courtesies. However, the major constraints to the effective implementation were inadequate funding, politics, and lack of capacity building/training. Also, Barnabas (2011) conducted a study on the impact of Millennium Village Project (MVP) in Pampaida, Saulawa District of Ikara Local Government Area of Kaduna State. The research revealed that, age, income, extension contact and gender, were among the major factors that influence the participation of beneficiaries in MVP. He further revealed that drugs and farm inputs greatly increased the output and income of respondents. A study conducted byAdeolu*et al.* (2004) on the impact of the NationalFadama Facility in Alleviating Poverty and Enhancing Agricultural Development in South-Western Nigeria, revealed that the programme had some positive impact on the participating farmers in the study area. The result further indicated that, there were positive increased in assets base of participants as well as their income by about three times, enhanced access to farm inputs, increased training and knowledge base of the participants in low-land irrigation farming. The programme had ensured high level of technical efficiency of participants. Therefore, these results suggested that, the programme had a positive impact on the participants and brought about wider potentials of alleviating rural poverty in the study area.

2.3 Rationale for CBARDP/IFAD Operations in Nigeria

The Country Programme Evaluation Report (CPE) of IFAD (2010) revealed that, Nigeria is one of the world's largest producers of oil. Its Gross Domestic Product (GDP) has increased five-fold since 1990 and stood at 140 billion US Dollars by 2007, given a GDP per capita of 10% per annum. Hence, Nigeria's 140 million populations

are still among the poorest in the World. 'The country was ranked 158th in the world out of 177 Nations in Human Development Index (HD1) of the United Nations Development Programme(UNDP) and 80" out of 108 in the Poverty Index (PI). Apart from the oil sector, the economy is agrarian based and the bias of poverty is to the rural areas (IFAD, 2010).

2.3.1 Impact of CBARDP/IFAD funded operations

According to IFAD (2010) the evolution of the portfolio of the programme in Nigeria from 1985 to 2006 followed a logical pattern of synergy of coverage and content, building on and expanding successful aspects of previous projects. This is best seen in the community-driven development (CDD) modality and Local Government Area (LGA) involvement: in capacity-building from KatsinaandSokoto Projects being incorporated in the Community-Based Agricultural and Rural Development Programme(CBARDP) and Community-Based Natural Resources Management Programme(CNRMP); and the latter drawing lessons also from the Cassava Multiplication and Artisanal Fisheries Development Projects. Synergy in the portfolio also contributes to performance, coinciding on strong themes of enhancing social facilities and services and improving food security and incomes of poor rural households. The new Rural Financial Institution BuildingProgramme (RUFIN) and Rural Micro Enterprise Development Programmes (RUMHDP) lake IFAD into a different spectrum of development as to content, institutional framework for implementation and some new States. However, the prevailing pattern of funding of earlier projects was planned as follows: i) Funding of IFAD Operations in Nigeria:African Development Bank (81%), Federal Government of

Nigeria(3%), States (6%), Local Government Areas (9%) and Participating communitiescontribute 1% either in the form of labour or cash.

2.3.2 Socio-economic characteristics of farmers

Agbelemoge*et al.* (2001) had revealed in his studies that some socio-economic characteristics such as age, household size, literacy level, farming experience, size of farm holding, have a significant effect on the perception, view, interest, acceptance and use of recommended farm practice. However, such factors of farmers have been found to influence their level of participation in implementation of agricultural programme as narrated by (Olufemi*et al.* 2006). Also Maiangwa (2006) found socio-economic factors associated with adoption of agro forestry in North-West zone of Nigeria. Adesehinwa and Okunlola, (2000) found that age and sex have no significant relationship with ruminant production in their studies on socio-economic constraints to ruminant production in some western states of Nigeria.

Sharma *et al.* (2003), reported in a study of Indian farm households that, all were male headed with a small family size and average age of 40 years old; however average age of commercial farmers was lower compared to other farm size activity. International Fund for Agriculture Development (IFAD) (1999), reported that the poorest segment of the population is characterized by low-average household size, limited labour and no access to fertilizer or credit. They have low crop yields, no marketable surplus and depend on low-income, off-farm activities for their economic survival. The relatively less-poor segment of the target group has enough family labour to produce sufficient marketable surplus but remains vulnerable.

Adekunle *et al.* (2005)in a project in Katsina reported that most farmers were male and involved in mixed farming. International Fund for Agricultural Development

(1999),reported that farmers generally have low crop yields, no marketable surplus, are very poor and depend on low-income, off-farm activities for their economic survival. A study by Alfred and Adepoju(2006) on the privatization of cocoa production in Ondo State, Nigeria also shows that most of the sample size fell between the ages of 41 – 50. The studies also show that the majority of the respondents had one level of formal education or the other. This they explained to mean that the more educated the respondents, the more likely it is that they would see the advantages attached to the adoption of recommended storage practices.

2.3.3 Previous findings on socio-economic characteristics of beneficiaries of agricultural and rural development programme.

A study conducted by Othman (2006) in Kano State of Nigeria on the impact of community based organizations on rural development indicates that 92% of participants were males while their age ranges between 21 – 30 with (26%), 31 – 40 (9%) 40 and above (65%), that means the findings revealed that in most rural communities there are more elderly people residing in the rural area because of rural urban migration by youth. The level of education of the respondents shows that they had formal educations. On their occupational status farming is their major occupation with a total of 85%.

A research was equally conducted in Ghana by Emmanuel *et al*. (2006) which indicated that farmers participating on irrigation project had some formal education. Most of them fall between the ages of 35 to 45 years. In the same manner, Adekunle*et al*. (2005) reported that; in Katsina project most farmers were male and involved in mixed farming. The findings revealed that, there is higher income for participant than non-participant in the irrigation project.

2.4 AFDB – CBARDP Activities

AFDB Community Based Agricultural and rural development programme is an integrated agriculture and rural development programme aimed at improvement of livelihoods and living conditions of the rural poor and other vulnerable groups such as youth; physical challenged, individuals living with HIV/AID and people who are suffering from the consequences of HIV/AIDS, orphans as well as the old. The programme is jointly funded by African Development Bank (AFDB), Federal Government Of Nigeria (FGN) and five participating states,fourty five Local Government Councils (LGCs) were one hundred and thirty five (135) village areas (RVAs) have been selected.

The programme had an effective period of seven years. It ensures community participation in the design and implementation of the project activities and sustainability, by providing the institutional support that will enable services providers to participate effectively and more responsive to the desires of the rural village areas (RVAs) using community driven development' (CDD) approach, which was seen as the most efficient and effective approach to poverty alleviation in Nigeria and subsequently, in the implementation of AFDB CBARDP (PIM, 2006).The programme was also been implemented through four components: Capacity Building, Production Development, Community Development, Project Management and Co-ordination to ensure project implementation and achievement of objective. The major objective of AFDB-CBARDP is to promote the adoption of the community-based approach (CDD) in addressing the problems of poverty and agricultural output.

2.5 Perspectives on Rural Development

In an attempt to review all about the concept of "rural development" effort is being made to look at development as a concept. It can be safely argued that, development as a concept is a multi-dimensional or many sided process. To some, it is merely quantitative change; meaning economic growth while others see it as qualitative change which means improvement in terms of living standard of people. According to Michael (2008) development is a multi-dimensional process involving changed in social structures popular attitudes and national institution as well as the acceleration of economic growth reduction of inequality and eradication abject poverty.

Similarly,Ekong (2003) perceived development as a multi-dimensional progress involving re-organization and re orientation of the entire economic and social system this involves in addition to improvement of income radical changes in institutional social and administrative structures as well as people. From the foregoing one can deduce that development as a concept is context-bounded and multi-faceted process. Therefore, any approach on development must be concerned with a peculiar type of social change with numerous dimensions, all of which are oriented towards making life better for all the citizens of social and political community.

Rural development as the central point of discussion is viewed as a process by which the set of technical, social, cultural and institutional measures are implemented with and for the inhabitants of rural areas with the aim of improving their socio-economic conditions in order to achieve harmony and balance both on the regional and national level (Ani, 2007). Rural development is also seen as action and initiative taken to improve the standard of living in non-urban neighbourhood, countryside, and villages. Agricultural activities may be prominent in this case, whereas economic activities

would relate to the primary sector production of foodstuffs and raw materials (Ijere, 1992).

Oyehialam (2002) reported that rural development is a cyclical process which is characterized by four main activities namely: Analysis; what is the current situation? Policy; who are the main actors and what do they want? Modeling; which developments are possible? Implementation; which measures should be used? These four activities could be found in all kinds of development process and each nation will therefore, have to look inward to design an appropriate strategy on the basis of its peculiarities and developmental antecedents.

2.5.1 Constraints of rural development programmes in Nigeria

The common setbacks limiting the effectiveness of rural development projects are:

i. Lack of commitment to rural development: While successive governments in Nigeria have made strong pronouncement on their determination on rural development, they are usually not consistent with capital budget allocation given to agriculture and rural development. When such allocations are substantial, release frequently falls short of the approved budget. Finally, only a fraction is expended on the project due to prevalent fund misappropriation in government agencies Idachaba (2002).

ii. Policy associated problems: Idachaba (2000) provided a critical synthesis of policy related problems including harsh policy environment; design and implementation of workable /desirable agricultural policies for intended beneficiaries and desirable consequences of policies; difficulty of the Nigerian agricultural sector to respond to a set of forces in external and domestic environment. High level of policy instability characterized by frequent reversal of policy is associated with governance and high degrees of political instability.

iii. Lack of systematic and coordinated implementation of programmes results in duplication of efforts: There are usually streams of interventions from government, international donor's agencies and non-governmental organizations to the same target systems but in an uncoordinated manner. In such instances, while progress is difficult to be comprehensively monitored and evaluated, more importantly is the fact that intervention grants thus provided "are typically balkanized funds with narrow focus tied to donors priorities" (World Bank, 2002).

iv. Lack of community empowerment: Most interventions targeted at rural development rarely affect the lives of the rural folks on sustainable basis because they are externally configured and executed with minimal participation of the real beneficiaries. Meaningful development can only be achieved on sustainable basis when beneficiaries, participate in planning, implementation and evaluation, and stake their locally available resources (Ijere, 1992).

v. High level of corruption: This has become a monster that frustrates any meaningful intervention and decimates their benefits since it is widespread and has permeated the socio – economic fabric of the Nigerian economy. Efforts to combat it must move from lip service to a responsive collective determination to wipe it off. While it is probably the most important socio- economic variable militating against development in Africa, it is rarely factored into our research equations Ladele (1990).

2.5.2 Community development

Rural community development is a process conducted by community members. It is a process where local people can not only create more jobs; income and infrastructure, but also help their community become fundamentally better able to manage change. The "concrete" benefits of community development, such as employment and infrastructure,

come through local people changing attitudes, mobilizing existing skills, improving networks, thinking differently about problems, and using community assets in new ways. Community development improves the situation of a community, not just economically, but also as a strong functioning community in itself (Ekong, 2003)

Rural community development builds the five capitals of a community – physical, financial, human, social and environmental. It is through participation in their community that people rethink problems and expand contacts and networks; building social capital. They learn new skills, building human capital. They develop new economic options, building physical and financial capital. They also can improve their environment Ekong (2003).

2.6 Theoretical Framework

This study was guided by Functionalist theory and Participation Concept.

2.6.1 Functionalist theory

This perspective view society as each part contributing to its survival. This school of thoughts belongs to Emile Durkheim, TalcotParsons and others that shared their views. Emile Durkheim 1858-1917 focused on the role of religion in reinforcing feeling of solidarity and unity within group life. It assumes that society has functional prerequisite which is the need of social order (Ekong, 2003). However, according to Talcot parsons 1902-1979, says any society has a vast network of connected parts, each of which contributes to the maintenance of the system as a whole. In general, functionalist perspective is based on analogy between biological organic systems and social system (Ekong, 2003). There is interest in the state of social wholes, for examples, a social whole may be Nigeria, Ghana, Tanzania etc, it may be a traditional African society such

as Yoruba Kingdom, Hausa Emirates etc. the importance of a social system or whole is seen in item of their contribution to the survival and maintenance of the system.

In examining any aspect of society including rural agricultural setting, functionalist emphasizes the contribution of every member of the society to overall social stability in any Agricultural Development Project. Agricultural development is seen as a powerful means of improving production and income of the rural people. The common values and interest of the rural people are sought in promoting an overall sense of belonging through participatory approach in ensuring unity and sustainability of such development. For example, agricultural extension teaching method is aimed at educating rural farmers on new farming techniques and awareness of new improved varieties of seeds. In disseminating this information, the cultural values, norms and beliefs of the people has to be taken into consideration in order to carry each member along to achieve the desired results. Agricultural development vividly represents important means for ensuring food security both nationally and internationally.

Agricultural development has helped to generate increased production and income of rural dwellers. The functionalists view agricultural development as part and parcel of the social system contributing its quarter in ensuring survival; of the social order. Functionalist also view rural agricultural development as evolving through felt needs or collective interest of the rural dwellers to increase their productivity and income generation to better their standard of living. Agricultural development contributes to the economic stability and prosperity of the rural people through improved productivity and earning. In conclusion, agricultural development objectives from functionalist perspective can be achieved when all the stakeholders involve in the development participate fully towards actualizing the desired objectives (Ekong, 2003).

2.6.2 Concept of participation

Participation has become one of the key concepts of communication and media studies, At the same time, the concept of participation has a long history, where especially in the 1960s and 1970s the debates about participation were omnipresent in a wide variety of societal fields. This has caused this concept to feature in a surprising variety of frameworks, which have been transformed through an almost infinite number of materializations. But the problems that characterize (the use of) participation have not disappeared, on the contrary (Sharma and Deepak,2001).

Already in 1970, Pateman wrote "the widespread use of the term participation has tended to mean that any precise, meaningful content has almost disappeared; 'participation' is used to refer to a wide variety of different situations by different people", and this situation has not altered. In communication and media studies, but also in many other fields and disciplines, participation is still used to mean everything and nothing remains structurally under theorized and its intrinsically political nature as part of a democratic ideological struggle on the democratic nature of democracy remains unacknowledged

Participation, in the development context, is a process through which all members of a community or organization are involved in and have influence on decisions related to development activities that will affect them. That implies that development projects will address those community or group needs on which members have chosen to focus, and that all phases of the development process will be characterized by active involvement of community or organization members. Through the 1990s, additional emphasis has been placed on community involvement in planning, decision-making and evaluation (Mitchell 1999, Sharma and Deepak, 2001). It has also been recognized that

Community Based Rehabilitation (CBR) partnerships can utilize resources in the community to reach larger numbers of persons with disabilities (Lang, 2000).

The World Bank's reasons for community participation are:

1. Local people have a great amount of experience and insight into what works, what does not work and why.

2. Involving local people in planning projects can increase their commitment to the project.

3. Involving local people can help them to develop technical and managerial skills and thereby increase their opportunities for employment.

4. Involving local people helps to increase the resources available for the programme.

5. Involving local people is a way to bring about 'social learning' for both planners and beneficiaries. 'Social learning' means the development of partnerships between professionals and local people, in which, each group learns from the other (World Bank, 2008).

2.7 Conceptual Model

Conceptual model consist of concepts that are placed within a logical and sequential design and represent less formal structure. Ekong (2003) views conceptual model as a broad system of explanation which is founded not so much on prior research findings but largely on untested and unproved assumptions about social realities. Furthermore, Asika (2001) reported that these relationships and functions can be represented schematically or mathematically.

A model is a figurative representation of a perceived object used to guide one in pursuit of knowledge.The model for this study shows the presumed impact of communitybased agricultural and rural development programme such as: farm input provided, crop production, livestock production and skill acquisition will increase and farmers will become food secure, rural income will rise, drift from rural to urban areas will reduce, wage earning activities will increase, there will be improvement in infrastructure facilities, capacity building will enhanced and rural livelihood will improve and the socio-economic and institution variables such as age, level of education, household size, cooperative membership, extension contact which is linked to the presumed effect which is farmers' participation. The outcome therefore, is the relationship that exists between the independent variable and the dependent variable. This results to increase in farmers' income, increased output and improved living condition. The variables are presented in figure 2.1.

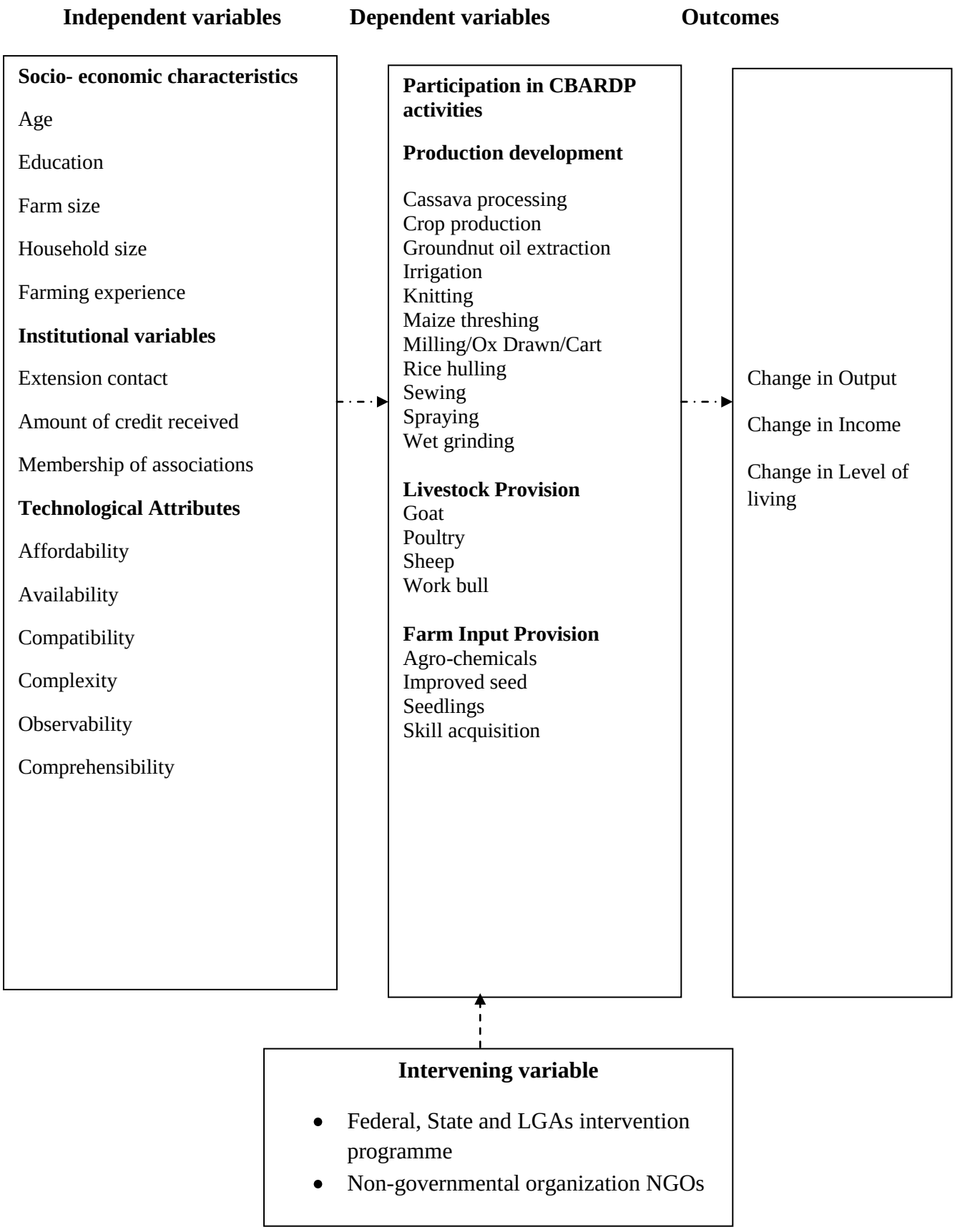


Figure 2.1: Model of impact of community based agriculture and rural development project on the participants.

CHAPTER THREE

METHODOLOGY

3.1 Study Area

The study was conducted in two selected areas of Kaduna State. Kaduna State is located in the Guinea Savannah ecological region of Nigeria. The state is situated in the north central part of the country, about 200km away from Abuja the federal capital. It is located between latitude $11^{0}32'$ and $9^{0}02'$ North of the equator and $8^{0}50'$ and $06^{0}15'$ East prime meridian. Kaduna State share boundaries with Katsina and Kano states to the north, Plateau State to the north-east, Nasarawa State and Abuja to the south and with Niger and Zamfara State to the west, (KADP, 2007).Kaduna State ADP has four (4) agricultural extension zones: Maigana, Samaru, Lere and Birnin-Gwari. These zones consist of the 23 Local Government Areas in the state.

The State has an estimated population of 6,066,526 million based on 2006 provisional population census figures (NPC 2006) and an agriculturally active population of farm families projection of 471,000 who cultivate an average farm size of 1.8ha. Based on these figure, the current population (2015) is projected at 8,117,222 comprising of farm families. The state has a total land area of 4.5 million hectares and the area under cultivation is 2.2 million ha, where 1.83 million area of the land is upland, while 0.08 million is Fadama land.

The cropping pattern is sole/mixed cropping and the major crops grown are: maize, sorghum, millet, rice, cowpea, yam, cassava, ginger, potatoes, vegetable and tree crops such as mango, citrus, guava, banana and sugar cane. Livestock types include: cattle, sheep, goats, rabbits, poultry and swine (KADP, 2007). The value orientations of the

populace include: familism, fatalism, empathy, risks, averse, traditionalism and submission to nature. The rural people have strong group cohesiveness.

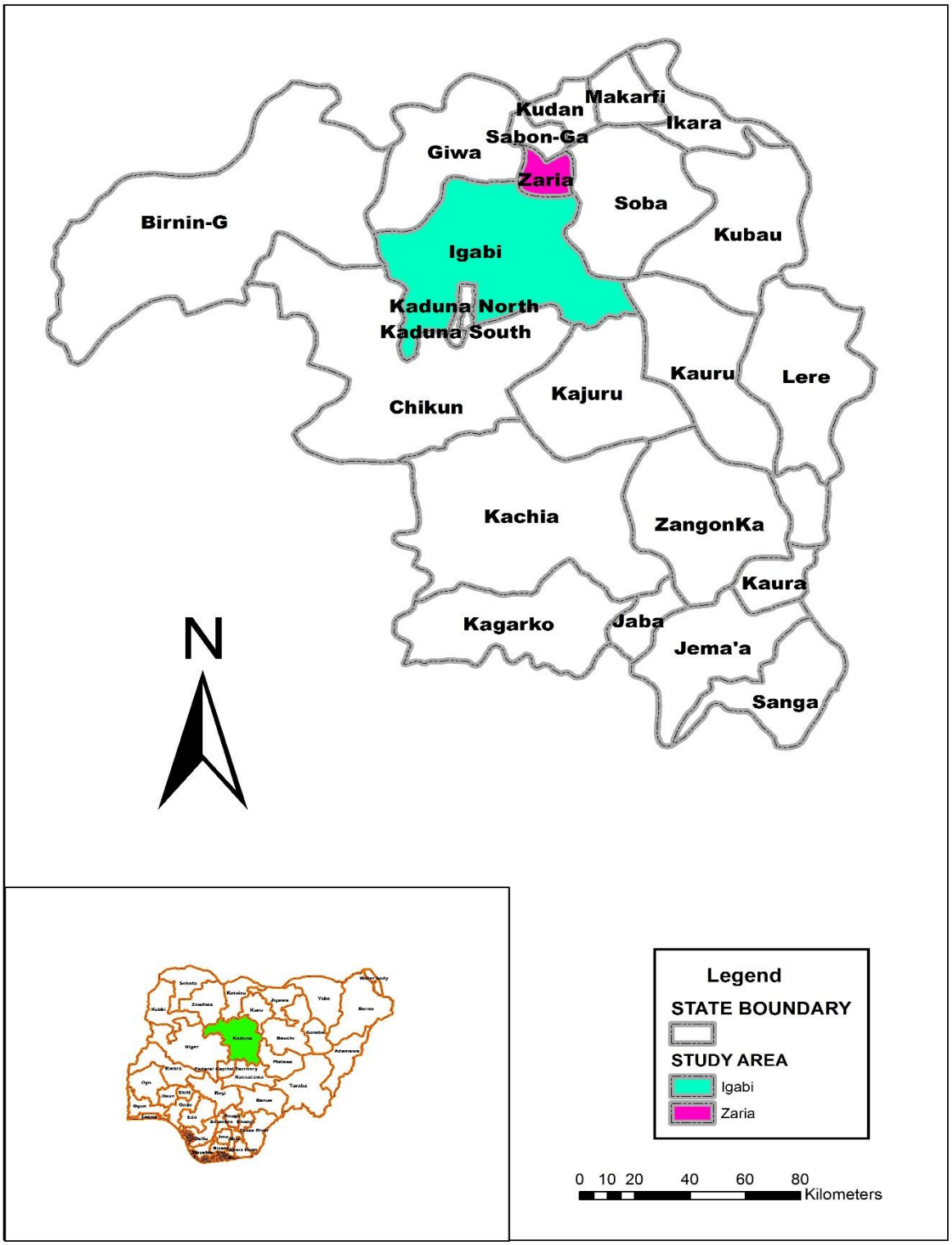


Figure 3.1: Map of Kaduna State showing the Study Areas

3.2 Sample Size and Sampling Techniques

The study was carried out in two Local Government Areas (Igabi and Zaria) of the State.In order to examine the impact of CBARDP on income and output of the respondents, a multistage sampling technique was employed to get the respondents. In the first stage, two Local Government Areas were selected purposively, out of the nine CBARDP benefiting LGAs in Kaduna State. These were Zaria in Northern zone, Igabi in central. At the second stage three villages were selected from each Local Government Area, making a total of six villages. These are Igabi,Gwaraji and Gwada in Igabi LGA, Kofar-Galadima,Kugu-Dutsen Abba and Aba Wuciciri from Zaria LGA. Thirdly,a sample frame of one thousand eight hundred and fifty two (1852) respondents were obtained and 10% of thetotal respondents was randomly selected, which form the sample size of 185 for the study (Table 3.1).

Table 3.1: Distribution of Respondents by Local Government Areas

Zones	Local Government Areas	Beneficiary Villages	No. of Participants	No. of Non-participants	Participants (%)	Non-participants (%)
Central	Igabi	Gwada	130	100	13	10
		Gwaraji	150	122	15	12
		Igabi	220	190	22	19
Northern	Zaria	Kugu-Dutsen Abba	260	210	26	21
		Kofar-Galadima	100	100	10	10
		Aba Wuciciri	130	140	13	14
		Total	**990**	**862**	**99**	**86**

Source: Reconnaissance survey, 2014

3.3 Method of Data Collection

The study made used of primary data. The primary data were collected through the administration of a structured questionnaire by enumerators with the aid of verbal interview to the respondents. Specific information collected included: socio-economic

characteristics of the respondents (gender, age, marital status, household size, and educational level, activities of the project and the income of the respondents. Others included: access to the activities of the project by the non-participants farmers, the output of the respondents and finally the constraints faced by the participating farmers were also collected

3.4 Analytical Techniques

The following analytical and statistical tools such as: Descriptive statistics (frequency distribution, percentage, mean), inferential Statistics (t-test) and chow test were utilized to analyze all the stated objectives of the study.

3.4.1 Descriptivestatistics

Description statistics such as means, percentages and frequency distribution were used to analyze socio-economic characteristics of respondents (objective i), identify and describe the activities of the Project (objective ii), Describe the Spillover effect of the Project (objective v) and describe the constraints of the Participants(objective vi).

3.4.2 Inferential statistics (t-test)

The t-test was used to test the hypothesis of the study at ($P < 0.1$) level of significance.

The general formula of the t-test is given as:

$$t = \frac{\bar{x}_1 - \bar{x}_2}{\sqrt{\frac{{s_1}^2 - {s_2}^2}{n_1 - n_2}}}$$

Where:

t = t-value

$\bar{X}_1$ = the mean sample of non-participants income

$\bar{X}_2$ = the mean sample of participants income

S^2_1 = Sample standard deviation for the non-participants income

S_2^2 = Sample standard deviation for the participants income

n_1 = Sample size of non-participants income

n_2 = Sample size of participants income.

3.4.3 Chow test

Impact of Community Based Agriculture and Rural Developmentprogramme on output and income of the participants and non-participants was achieved using Chow-test statistic. A Chow test is a particular test for structural change; an econometric test to determine whether the coefficients in a regression model are the same in separate sub-samples. According to Rosenzweig (1980) "the standard F test for the equality of two sets of coefficients in linear regression models" is called a Chow test. Dougherty (2007) stated that chow-test statistics is often used in programme evaluation to determine whether the programme has impacts on different sub-group of the population. It requires the sum of squared residuals from three regressions, one from each sample group and one for the pooled data. If the F-chow is greater than the F-table, then there was programme impact on the participants otherwise no impact. This is expressed mathematically as:

$$F = \frac{(RSSR - SSR1 - SSR2)/k}{(SSR1 + SSR2)/n - 2k}$$

Where;

RSSR = the sum of squared residuals from a linear regression in which $b_1$and $b_2$are assumed to be the same, b has dimension k, and there are n observations in total.

SSR_1= the sum of squared residuals from a linear regression of sample 1.

SSR_2= the sum of squared residuals from a linear regression of sample 2.

The total number of observation is $n = n_1 + n_2$and the number of parameters is k.

CHAPTER FOUR

RESULTS AND DISCUSSION

4.1 Socio-Economic Characteristics of Respondents.

4.1.1 Sex of respondents

Sex is a biological differentiation of an individual into either muscularity or feminity. It is an important variable as far as participation in agricultural programme is concerned. The result in Table 4.1 revealed that 70% of the participants of the project were females and 85% of the non-adoptions were also females. This implies that female dominated or participated more in the study area. The findings is not in line with Adekunle*et al*. (2005) whose findings reveals that; in Katsina project most farmers were male and involved in mixed farming.

4.1.2 Marital status of respondents

The result in table 4.1 of the analysis shows that 97% of the participating farmers were married while non-participating farmers were also dominated by married people with 86%. This reveals that married farmers participated more on the project than singles. This implies that 85% of the participating and non-participating farmers interviewed in the study area have family responbilities, which shows that majority were married and are expecting to have children which would help in appreciable number of family labour supply to accomplish various farm operations.This finding is in line with Solomon (2008), who found out in his studies of identification of training needs of oil palm farmers in Rainforest Zone of South Western Nigeria, that large household size assists more on farm and other household activities.

4.1.3 Age of respondents

The analysis in Table 4.1 indicates that 42% of the participants were between the age of 41-50 years, while 34% of the non-participants were at the range 21-30 years old. This implies that farmers between the ages of 41-50 participated more on the project and farmers at this stage could have better understanding of technologies introduced. This findings supports the findings of Olaleye*et al*. (2009) that majority of the sampled

farmers in their study were within the productive age of between 21 and 50 years. Also, a study by Adubi (2003) reveals that age, in correlation with farming experience, has a significant influence on the decision- making process of farmers with respect to risk aversion, adoption of improved agricultural technologies and other production-related decisions. Age has been found to determine how active and productive the head of the household would be. Age has also been found to affect the rate of household adoption of innovations, which in turn, affects household productivity and livelihood improvement strategies (Dercon and Krishnan 1996).

4.1.4 Income of respondents

Rural farm household's income was basically categorized into two, viz. farm and non-farm income. The study also found out that 25% of the participating farmers realized ₦500,000 and above as income while 22% of the non-participating farmers realized ₦100001-₦200,000 as income.The results indicate that participating farmers earn more income compared to the non-participating farmers. This implies that participation in Community Based Agriculture and Rural Development Project had enhanced participant's income as compared to the non-participants.

4.1.5 Household size of respondents

The result in Table 4.1 shows that majority (49.5%) of the participating farmers and 81.4% of the non-participating farmers had house-hold size within the range of 1 – 10 persons with an average of 12 and 7 persons per household for participating farmers and non-participating farmers. This means that there is large number of people eating from the same cooking pots. This may be a good source of farm labour. The significance of household size in agriculture suggest the availability of labour for farm production, the total area cultivated to different crop enterprises, the amount of farm produce retained for domestic consumption, and the marketable surplus are all determined by the size of

the farm household. However, the number of people in households cannot be used to justify the potential for farm labour, because factors such as health, age and sex can affect labour.

According to Mohammed (2011), the average family size of the respondents was 8 persons. Oladeebo (2003), states that large family size characterized a developing country including Nigeria. He reported that 85% of the sampled respondents in a study conducted in Osun State are having family size ranging between 6 and 10. In another study by Mahabub and Jaim (2011), average family size of the farmers' household was found to bebetween the range of 4 to 5 persons.

4.1.6 Level of education of respondents

Majority of the farmers in the study area had one form of education or another.The result of the analysis reveals that 32% of the non-participants had primary education, while 37% of the participants attended tertiary institutions, which indicates that the participants has higher education than the non-participants in the study area. The implication of this is the greater potential of adoption of innovations and easy access of information. Furthermore, formal education attained by an individual goes a long way in shaping his/her personality, attitude to life and to access to resources. According to Amaza*et al*.(2009) the level of farmers' education is believed to influence the use of improved technology in agriculture and, hence, farm productivity and which couldreduce the level of poverty. It also affects the level of exposure to new ideas and managerial capacity in production and how to adopt and integrate innovations into the household's survival strategies.

4.1.7 Primary occupation of respondents

In rural community, it is common for some farm household to engage in other nonfarm occupations to complement their earnings from farming. The result shows that majority

of the respondents are primarily into farming. Farming was the most important occupation of the household heads. The results showed that 94% of the non-participants were farmers while 65% of the participants were also farmers. This indicates that the participants have diversified their source of income than the non-participants.The implication of this finding is that the diversification of income source of the farming household heads can help to reduce the risk associated with income from a single source especially a very risky enterprise such as agriculture.This finding is in line withAjakaiye (2001) and Omonona (2000) that non-farm earnings are gradually becoming important, especially for the youths and the educated.

Table 4.1 socio-economic characteristics of the farmers

	Participants		Non-participants	
Variables	**Frequency**	**Percentage**	**Frequency**	**Percentage**
Sex				
Male	30	30	13	15.0
Female	69	70	73	85.0
Total	99	100	86	100
Marital Status				
Married	96	97.0	74	86.0
Single	3	3.0	11	13.0
Divorced	-	-	1	1.0
Total	**99**	**100**	**86**	**100**
Age (years)				
20-30	9	9.1	40	46.5
31-40	19	19.2	26	30.2
41-50	42	42.4	12	14.0
51-60	21	21.2	8	9.3
61-70	6	6.1	-	-
71-80	2	2.0	-	-
Total	**99**	**100.0**	**86**	**100.0**
Min	**25**		**14**	
Max	**80**		**60**	
Mean	**47**		**33**	
Income (#)				
100000- 200000	20	20	31	36
200001 - 300000	6	6.0	12	14
300001 – 400000	16	16.0	2	2.0
400001 – 500000	29	29.0	1	1.0
Total 99	**100**	**86**	**100**	
Mean	**439,700**		**154,360**	

Table 4.1 continuation of socio-economic characteristics of the famers

	Participant		Non Participant	
Variables	**Frequency**	**Percentage**	**Frequency**	**Percentage**
Household Size				
1-5	13	13.1	35	40.7
6-10	36	36.4	35	40.7
11-15	23	23.2	8	9.3
16-20	15	15.2	6	7.0
21-25	10	10.1	2	2.3
26-30	2	2.0	-	-
Total	**99**	**100**	**86**	**100**
Min	**3**		**0**	
Max	**30**		**21**	
Mean	**12**		**7**	
Level of education				
Primary	15	15.0	22	32.0
Secondary	7	7.0	21	30.0
Tertiary	37	37.0	17	25.0
Adult education	14	15.0	15	7.0
Quaranic	26	26.0	11	6.0
Total	**99**	**100**	**86**	**100**
Primary occupation				
Artisan	7	7.1	3	4.0
Civil servant	10	10.1	1	10
Farming	65	65.4	81	94.0
Trading	17	17.4	1	1.0
Total	**99**	**100**	**86**	**100**

4.2 Description of the Project Activities

The result in Table 4.2 shows that crop production had participation (21%), among the project activities in the study area, inputs provision (79%), livestock management training (72%), skills acquisition tools (62%), processing of farm products activities (57%) village development training (54%), livestock provision (44%), capacity building on animal traction (43%), community development activity (35%) and lastly production development is having (26%) level of participation among the project activities. Hence, the functional status of these activities provided may bring about income savings

stemming from reduced expenditure on the items which can be diverted to other areas of consumption such as food which may improve the feeding standard of the respondents. Thus the activities in question may bring about development to the areas of study which may improve the income and output of the residents.

In terms of spill-over effect of the project activities on the non-participants. Alsothe results in Table 4.2revealed that the non-participant (50%) of the project took part in livestock provision, In terms of hiring work bulls at a cheaper for cultivation. They also benefit through cross-breeding. The result also indicates that the non-participants (50%) enjoy level farm input provision through neighbours and friends.The analysis of the result further indicates that the non-participants (50%) took part in the processing of farm products while all (100%) wereinvolved in livestock management.This implies that despite the fact that, the non-participants do not participate directly but they had benefited indirectly from the projects activities.

Table 4.2 Activities of the Project in the Study Area

Activities	Participants		Non-Participants	
	Frequency	Percentage	Frequency	Percentage
Production Development				
Cassava Processing	2	2.3	--	--
Crop Production	18	20.5	--	--
Groundnut Oil extraction	2	2.3	--	--
Knitting	4	4.5	--	--
Maize Threshing	7	8.0	--	--
Milling/Ox Drawn/Cart	9	10.2	--	--
Rice Hulling	5	5.7	--	--
Sewing	7	8.0	--	--
Spraying	11	12.5	--	--
			--	--
Total	88	100	--	--
Livestock Provision				
Goat	33	36.7	22	50.0
Poultry	4	4.4	22	50.0
Sheep	40	44.4	--	--
Work Bulls	13	14.4	--	--
Total	90	100	44	
Farm Inputs Provision				
Agro-Chemicals	8	8.6	--	50.0
Fertilizer	73	78.5	--	--
Improve Seeds	8	8.6	--	--
Seedlings	4	4.3	--	--
Total	93	100	--	--
Skills-Acquisition-Tools				
Barbing Tools	11	37.9	--	--
Plumbing Tools	18	62.1	--	--
Total	**29**	**100**	--	--

Table 4.2 Continuation of Activities of the Project in the Study Area

	Participants		Non-participants	
Capacity Building	**Frequency**	**Percentage**	**Frequency**	**Percentage**
Animal traction				
Barbing	2	5.0	--	--
Hair Dressing, Welding, Motor Mechanic	11	27.5	--	--
Plumbing	6	15.0	--	--
Skill acquisition, Tailoring, Knitting, and Shoe making	17	42.5	--	--
Soap Making	3	7.5	--	--
Tie Dye	1	2.5	--	--
Total	40	100	--	--
Processing Training				
Cassava Processing	2	5.7	--	--
Grinding	3	8.6	--	--
Groundnut Oil Extraction	20	57.1	--	--
Processing	3	8.6	--	--
Rice Hulling	7	20.0	--	50.0
Total	35	100	--	--
Livestock-Management				
No	21	28.0	--	50
Yes	54	72.0	--	50
Total	75	100	--	--
Village-Development				
No	38	54.3	--	--
Yes	32	45.7	--	--
Total	70	100	--	--
Crop Production				
Adaptive Research and Trials	7	11.7	--	--
MTPS	53	88.3	--	--
Total	60	100	--	--
Community Development Activities				
Bore Holes	21	28.0	--	--
Feeder Roads	26	34.7	--	--
Home Garden	5	6.7	--	--
Interactive Visits	14	18.7	--	--
Tube Wells/Wash Bores	9	12.0	--	--
Total	75	100	--	--

4.3 Impact of CBARDP Project on Income of Farmers

In determining the impact of CBARDP project on the income of the participants and non-participants. The total income of the farmers was used in determining the impact. The farmer's income was calculated from crop income, Livestock income, and wages from regular employment. Hence, the total income was then used to determine the impact of the project.

The mean annual income of livestock farmers' participant (₦ 412,720) is higher than the mean annual income of non-participant (₦276, 844) which implies that CBARDP participant realized higher income than non-participant. The result of the t-statistic in table 4.4 clearly shows that the difference between the annual income of the participant and non-participant is significant thereby implying that livestock production had an impact on the income of the participant which contributed in enhancing the income of the farmers. The standard deviation of the income of the participant (369, 670) is higher than that of non-participant (186,423) which imply that there is a higher variability in the income of participant than non-participant. Higher income helps small scale farmers in their predicaments thereby influencing them to participate in CBARD programme where they are linked to source of income, improved seeds and breed of livestock and training on best agronomic practices, which increase their farm income as well.

Table 4.3: Frequency distribution of livestock income of CBARDP on farmers.

Income range(₦)	Participant		Non-participant	
	Frequency	Percentage	Frequency	Percentage
100, 000 - 200, 000	28	28.29	29	33.72
200, 001 - 300, 000	36	36.36	15	17.44
300, 001- 400, 000	12	12.12	10	11.63
400, 001 - 500, 000	12	12.12	18	20.93
500, 001 - 600, 000	11	11.11	14	16.27
Total	**99**	**100**	**86**	**100**
Mean	**412,720**		**276, 844**	
Minimum	**74,000**		**51,000**	
Maximum	**1,300,000**		**780,000**	
Standard deviation	**369,670**		**186,423**	

The impact of CBARDPproject on the income of the participants and non-participants farmers in the study area was achieved using chow test statistics. The Chow Test is a test that determines if the coefficients from two regression analyses are the same. However, three different linear regressions were carried out comprising of the pooled samples of participants and non-participants, and separate linear regression for participants and non-participants respectively. The residual sum of square of each of the three regressions was used to compute the chow test. The decision rule was that if Chow F-statistics is greater than that of F-table, there is impact of CBARDPproject on income and structural differences between the participants and non-participants in terms of income, if otherwise there is no impact of CBARDPproject in the study area.

The result from Table 4.4 revealed that the Chow F = 1.98, while F table value at 5 degree of freedom with sample size of 185 was 1.97 at $p<0.05$ level of probability implying a significant impact of CBARDP project on income of the participants in the study area since the F calculated was greater than the F table.

Table 4.4: Impact of CBARDP project on income of farmers

Group Sample	R^2	Residual sum of square	N	K	F-cal	F-tab
Pooled Samples	0.29	4597871+08	185	6	1.98	1.97
Participants	0.85	2358410E+08	99			
Non-participants	0.29	196661E+08	86			

R^2 = regression coefficient, N = numbers of observation and K = numbers of parameters

4.4 Impact of CBARDP Project on Output of Farmers

4.4.1 Impact of CBARDP project on maize output of farmers

The average maize output (4293.94kg) for participant is higher than the mean output for non-participant (3304.65kg) which implies that CBARDP participant realized higher maize output than non-participant. The minimum maize output obtained for the participant and non-participant was 1 for both while the maximum output were 400 and 300 bags respectively. The standard deviation of the maize output for participant (56.2) is higher than that of non-participant (53.0) which imply that there is a higher variability in the maize output of participant than non-participant. Higher maize output helps small scale farmers in their predicaments thereby influencing them to participate in CBARD programme where they are linked to source of income, improved seeds and training on best agronomic practices, which increase their farm output.

Table 4.5: Frequency distribution of maize output of participants and non-participants in CBARD project

	Participants		Non-participants	
Kg	Frequency	Percentage	Frequency	Percentage
100-2000	50	58.1	46	46.5
2100-4000	19	22.1	24	24.2
4100-6000	3	3.5	8	8.1
6100-8000	4	4.7	5	5.1
8100-10000	10	11.7	16	16.2
Total	**86**	**100**	**99**	**100**
Mean	**42.9**		**33.0**	
Minimum	**1**		**1**	
Maximum	**400**		**300**	
Std dev.	**56.2**		**53.6**	

The impact of CBARDP project on the output of the participants and non-participants in the study area was achieved using chow test statistics. The chow test statistics was used to determine the impact of CBARDP project on the maize output of the participants and non-participants in the study area.The Chow Test is a test that determines if the coefficients from two regression analyses are the same. However, three different linear regressions were carried out comprising of the pooled samples of participants and non-participants, and separate linear regression for participants and non-participants respectively. The residual sum of square of each of the three regressions was used to compute the chow test. The decision rule was that if Chow F-statistics is greater than that of F-table, there is impact of CBARDP on maize production and structural differences between the participants and non-participants in terms of maize output, if otherwise there is no impact of CBARDP project in the study area.

The result from Table 4.6 revealed that the Chow F = 2.17, while F table value at 5 degree of freedom with sample size of 185 was 2.17 at $p<0.05$ level of probability implying a significant impact of CBARDP project on the maize output in the study area since the F calculated was greater than the F tabulated.

Table 4.6: Impact of CBARDP project on output of maize farmers

Group Sample	R^2	Residual sum of square	N	K	F-cal	F-tab
Pooled Samples	0. 37	10937799 E+3	185	6	2.17	1.97
Participants	0.58	3394491E+3	99			
Non-participants	0. 41	7144530 E+3	86			

R^2 = regression coefficient, N = numbers of observation and K = numbers of parameters

4.4.2 Impact of CBARDP project on rice output of farmers

The average rice output (2749.4kg) for participant is higher than the mean output for non-participant (2487.1kg) which implies that CBARDP participant realized higher rice output than non-participant. The minimum rice output obtained for the participant and non-participant was 10 and 16 bags respectively while the maximum output were 80 and 100 bags respectively. The standard deviation of the rice output for participant (27.5) is higher than that of non-participant (24.8) which imply that there is a higher variability in the rice output of participant than non-participant. Higher rice output helps small scale farmers in their predicaments thereby influencing them to participate in CBARD project where they are linked to source of improved seeds and training on best agronomic practices, which increase their farm output.

Table 4.7: Frequency distribution ofrice output of participating farmers and non-participating farmers in CBARD project

	Non-Participants		Participants	
Output Kg	Frequency	Percentage	Frequency	Percentage
100-2000	33	25	12	14
2100-4000	12	24	29	27
4100-6000	9	30	10	18
6100-8000	1	18	3	33
8100-10000	Nil	Nil	16	8
Total	**55**	**100**	**59**	**100**
Min	**10**		**16**	
Max	**80**		**100**	
Mean	**24.8**		**27.5**	

The impact of CBARDP project on the rice output of the participants and non-participants in the study area was achieved using chow test statistics.The Chow Test is a test that determines if the coefficients from two regression analyses are the same. However, three different linear regressions were carried out comprising of the pooled samples of participants and non-participants, and separate linear regression for participants and non-participants respectively. The residual sum of square of each of the three regressions was used to compute the chow test. The decision rule was that if Chow F-statistics is greater than that of F-table, there is impact of CBARDP on riceproduction and structural differences between the participants and non-participants in terms of rice output, if otherwise there is no impact of CBARDP project in the study area.

The result in table 4.8 revealed that the Chow F = 2.12, while F table value at 6 degree of freedom with sample size of 185 was 1.97 at $p<0.05$ level of probability implying a significant impact of CBARD programme on output of rice farmers in the study area since the F calculated was greater than the F table.

Table 4.8: Impact of CBARDP project on rice output of farmers

Group sample	**R^2**	**RSS**	**N**	**K**	**F-cal**	**F-tab**

Pooled Samples	0.59	201042.3	114	6	2.12	1.97
Participant	0.41	70959.42	59			
Non-participant	0.24	10824.25	55			

4.4.3 Impact of CBARDP project on cowpea output of farmers

The average cowpea output (739.2kg) for participant is higher than the mean output for non-participant (589.2kg) which implies that CBARDP participant realized higher cowpea output than non-participant. The minimum cowpea output obtained for the participant and non-participant was 1 and 6 bags respectively while the maximum output were 38 and 34 bags respectively. The standard deviation of the maize output for participant (27.5) is higher than that of non-participant (24.8) which imply that there is a higher variability in cowpea output of participant than non-participant. Higher cowpea output helps small scale farmers in their predicaments thereby influencing them to participate in CBARD programme where they are linked to source of improved seeds and training on best agronomic practices, which increase their farm output.

Table 4.9: Frequency distribution of cowpea output of participants and non-participants in CBARD project

	Non-Participants		Participants	
Output Kg	Frequency	Percentage	Frequency	Percentage

100-1000	12	50.0	8	26.6
1100-2000	8	33.3	18	60.0
2100-3000	4	16.7	2	6.7
3100-4000	Nil	Nil	2	6.7
Total	**24**	**100**	**30**	**100**
Min	**1**		**6**	
Max	**30**		**38**	
Mean	**5.89**		**7.39**	

The impact of CBARDP project on the cowpea output of the participants and non-participants in the study area was achieved using chow test statistics.The Chow Test is a test that determines if the coefficients from two regression analyses are the same. However, three different linear regressions were carried out comprising of the pooled samples of participants and non-participants, and separate linear regression for participants and non-participants respectively. The residual sum of square of each of the three regressions was used to compute the chow test. The decision rule was that if Chow F-statistics is greater than that of F-table, there is impact of CBARDP on cowpea production and structural differences between the participants and non-participants in terms of cowpea output, if otherwise there is no impact of CBARDP project in the study area.

The result in 4.10 revealed that the Chow F =4.83, while F table value at 6 degree of freedom with sample size of 185 was 1.97 at $p<0.05$ level of probability implying a significant impact of CBARD project on output of cowpea farmers in the study area since the F calculated was greater than the F table.

Table 4.10: Impact of CBARDP project on cowpea output of farmers

Group sample	R^2	RSS	N	K	F-cal	F-tab
Pooled samples	0.57	4248109E+07	54	6	4.83	1.97
Participant	0.51	3426267 E+07	30			

Non-participant	0.34	7294023 E+06	24

Hypothesis I:

It was hypothesized that: there is no significant difference between the income of the participants and non-participating farmers in the project area. However, after estimation the results shows that difference exist between the income of the participating farmers and non-participating famers in the study area. From the result in the Table 4.11, an average income for the participant was 596691.238 and average income for non-participant was 102561.901. The calculated t =1.98 and exceeds the critical value (t-critical two tail) of 1.97, therefore $H_o$is rejected at 5% level of significance. The result of the analysis indicates that CBARDP project had a significant impact on the income of the participating farmers in the study area. Therefore the null hypothesis stating that, there is no significant difference between the income of participants and non-participants was rejected.

Table 4.11: Result of t-test on significant differences between income of participants and non-participants.

	Income of participant	**Income of non-participant**
Mean	596691.238	102561.901
Variance	1.56996E+12	3.27866E+12
Observations	99	86

Hypothesized Mean Difference	0
Df	148
t Stat	-1.984
P(T<=t) one-tail	0.033
t Critical one-tail	1.655
P(T<=t) two-tail	0.066
t Critical two-tail	1.97*

* $p \leq 0.05$

Hypothesis II:

It was hypothesized that: there is no significant difference between the output of the participants and non-participating farmers in the project area. However, after estimation the results shows that difference exist between the output of the participating farmers and non-participating famers in the study area. From the result in the Table 4.12, an average output for the participants was 4293.93 and average output for non-participants was 3304.65. The calculated t-value was 2.22 and exceeds the critical value (t-critical two tail) of 1.97, therefore $H_o$is rejected at 5% level of significance. The result of the analysis indicates that CBARDP project had a significant impact on the output of the participating farmers in the study area. Therefore the null hypothesis stating that, there is no significant difference between the output of participants and non-participants was rejected.

Table 4.12: The result of t-test on significant differences between maize output of participant and non-participant.

	Output of non-participant	**Output of participant**
Mean	3304.651163	4293.939394
Variance	28734978.11	31637513.91

Observations	86	99
Hypothesized Mean Difference	0	
Df	181	
t Stat	-2.22	
P(T<=t) one-tail	0.111	
t Critical one-tail	1.653	
P(T<=t) two-tail	0.222	
t Critical two-tail	1.97**	

Hypothesis iii

Economic logic would suggest that well informed small scale farmers will not voluntarily enter into CBARD project unless they believe there will be benefits. However, the actual impact of participation in the project scheme may be negative because of misperceptions of lack of information. But evidence from studies revealed that successful project generally impact positively on the output and incomes of farmers who are participants in the scheme.

The result presented in table 4.13, revealed that the average output for small scale rice non-participant farmers was 2487.1, while the average output for small scale rice participant farmers was 2749.3. The calculated t-value was -3.60. Therefore the null hypothesis is rejected at$P \leq 0.05$level of significance. The result of the analysis indicates that there is a significant impact of participation in CBARDP on small scale rice farmers' output.

Table 4.13: The result of t-test showing significant difference between farm output of rice participant and non-participant farmers.

Variable	Non-participants	Participants
Mean	2487.1	2749.3
Standard deviation	161.86	159.64
Observations	55	59

Hypothesized mean difference	0
Df	54
t Stat	-3.60
P(T<=t) one tail	0.03
t Critical one tail	1.67
P(T<=t) one tail	0.06
t Critical one tail	1.97 **

** $P \leq 0.05$

Hypothesisiv

Economic logic would suggest that well informed small scale farmers will not voluntarily enter into CBARD project unless they believe there will be benefits. However, the actual impact of participation in the project scheme may be negative because of misperceptions of lack of information. But evidence from studies revealed that successful project generally impact positively on the output and incomes of farmers who are participants in the scheme.

The result in table 4.14 revealed that the average output of small scale cowpea non-participant farmers was589.2, while the average output for small scale cowpea participant farmers was 739.2. The calculated t-value was -2.15. Therefore, the null hypothesis is rejected at $P \leq 0.05$level of significance. The result of the analysis indicates that there is a significant impact on participation in CBARDP on small scale cowpea farmers' output.

Table 4.14: The result of t-test showing significant difference between output of participant and non-participant cowpea farmers.

Variable	**Non-participants**	**Participants**
Mean	589.2	739.2
Standard deviation	315.1	360.9
Observations	24	30

Pearson Correlation	0.11
Hypothesized mean difference	0
Df	27
t Stat	-2.15
P(T<=t) one tail	0.021
t Critical one tail	1.69
P(T<=t) one tail	0.04
t Critical one tail	1.97**

** $P \leq 0.05$

4.5 Constraints faced by the Respondents in CBARDP.

The results in Table 4.15 revealed that 56% of the participants interviewed complained about inadequate production inputs as the major constraint in the study area. Another constraint (2nd in ranking) was inadequate provision of infrastructure which constituted 13%. Inadequate extension contact had 11% (ranked 3rd), lack of credit facilities was (ranked 4th) with 10% of the participants, the meager savings the farmers might have made or the funds generated from relatives and personal savngs is not sufficient to satisfy various activities in their production. Credit is a very strong factor that is needed to acquire or develop any enterprise; its availability could determine the extent of production capacity.

This agrees with finding of Abdulrahman*et al*., (2015) who noted that access to micro-credit could have prospect in improving the productivity. The results further indicates that lack of farmers involvement in planning at the initial stage of the project which was (ranked 5th) with 7%. The participants interviewed complained of short term period of the project which was (ranked 6th) and had 2% while lack of co-operation among the participants, of the project in the study area was 1% and (ranked 7th). Production inputs serve as the most important materials needed in the process of agricultural production, because it used to determine the quantity of output obtained by the farmers, so any short fall in the supply of inputs may lead to poor harvest by the farmers. Lack of good road

network, poor extension contact lack of funds, poor co-operation between farmers and finally lack of farmer's involvement in planning impedes the development of agriculture general.

Table 4.15 constraints faced by Respondents

Constraint	**Frequency**	**Percentage**	**Ranking**
Inadequate production inputs	66	56	1st
Inadequate infrastructure	15	13	2nd
Inadequate extension contact	13	11	3rd
Lack of credit facilities	12	10	4th
Lack of involvement of farmers in planning	8	7	5th
Life span of the project was short	2	2	6th
Lack of co-operation among the participant	1	1	7th
Total	**117**	**100**	

Note: * = Multiple Response

CHAPTER FIVE

SUMMARY, CONCLUSIONAND RECOMMENDATIONS

5.1 Summary

This study was designed to analyze the impact of community based agriculture and rural development project (CBARDP) on participants income and output in Kaduna state, Nigeria. Specifically, the study described the socio-economic characteristics of the respondents: Identified and described the basic activities provided by the project; determined the impact of the project on the income of participants; determined the output of the project participants; assess the spillover effects of the project activities on the non-participating farmers and identified and described the constraints encountered by the project participants.

Farmers were randomly selected from six villages or communities across the two senatorial zones of the state. A structured questionnaire was used to elicit primary data from 185 respondents. Descriptive statistics, inferential statistics (t-test),chow test and propensity score matching were used for the analysis. The findings revealed that out of 185 respondents, majority (70%) of the participants were females and (85%) of the non-participants were also females with an average of 41 years. About 91% were married, having a house hold size between 6-10 persons. About 32% had educational attainment of primary and 27% post-secondary school level.

The activities of the project were identified and the participation of the respondents in the activities are crop production 88%, farm inputs provision 79%, livestock management training 72%, skills acquisition 62%, for processing 57%, village development training 54%, livestock 44%, capacity building on animal traction 43%, community development activity 35% and production development 28%. The project activities have spread from the participants to the non-participants in some areas of activity which include livestock provision 50%, farm inputs provision 50%, food processing 50%, livestock management 100% and village development was 50%.

The results from the chow test analysis revealed that CBARDP had a positive impact on output, and income of the participating farmers since the F-calculated is greater than the F-tabulated and significant at 5% level. The t-test analysis of both income and output shows significant differences between the participants and non-participants income and output.The respondents during the interview highlighted various constraints encountered in the project in order of severity as follows. Inadequate production inputs, infrastructure, extension contact, lack of credit facilities. Involvement of farmers in planning, co-operation among the participants and short duration of the project. These constraints served as impediments to the respondent's participation in CBARDP.

5.2 Conclusion

This study was aimed at providing useful and basic information on the impact of CBARDP on the income and output of the participants. It was found out that the participants benefited from all the eleven activities identified of the project, it has even a spillover effect on the non- participants where they benefited indirectly from some of the activities. As a result of the project intervention the farmers' income and the output were increased to a significant level. The null hypothesis which stated that "there is no significant difference between the participants and non-participants income in the study area" was rejected and the alternative accepted. Meaning that, CBARDP had improved the income and output of the beneficiaries in the study area. It was therefore concluded, that, CBARDP had impacted positively on the income and output of the beneficiaries in Kaduna state, Nigeria.

5.3Recommendations

In view of the major findings of this study the following recommendation were made:

i. Since, CBARDP has impacted positively on the income and output of the respondents in Kaduna state; it was recommended that the project be scale out to other non-CBARDP benefitting local government areas of the state in order to record an increase on income and output.

ii. Inadequate capital and lack of cooperation among participants were two major constraints to participate in the programme; beneficiaries should be encouraged to form viable cooperative group in order to understand each other and pool their resources together to improve their financial capability.

iii. The project planners and implementers should intensify sensitization among rural dwellers and adopt the use of community driven development projects as such will help in addressing farmer's priority needs.

iv. Government should employ enough agricultural extension workers so as to balance the ratio between extension workers to farmers for easy delivery of messages.

5.4 Contribution to knowledge

i. The participants (29%) had an average income of ₦596,691.238 and the non-participants (36%) with ₦102, 561.

ii. The participants output was higher than the output of the non-participants 20,916.20kg and 15,377.37kg respectively.

5.5 Suggestion for Further Studies

The research was conducted in only two local government areas across the two senatorial zones of Kaduna state Nigeria. It is suggested that, a similar study should be conducted in the other CBARDP participating local governments to provide a more comprehensive picture of the impact of the project in the state.

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APPENDIX I: RESEARCH QUESTIONNAIRE FOR FARMERS

DEPARTMENT OF AGRICULTURAL ECONOMICS AND RURAL SOCIOLOGY, AHMADU BELLO UNIVERSITY, ZARIA

RESEARCH QUESTIONNAIRE A (PARTICIPANTS)

TOPIC: IMPACT ASSESSMENT OF COMMUNITY BASED AGRICULTURE AND RURAL DEVELOPMENT PROJECT ON THE PARTICIPANTS OUTPUT AND INCOME IN KADUNA STATE

Dear Respondent,

This questionnaire will be used by a student in the above-named department. Please, provide the necessary information required in the questionnaire which will be treated with utmost confidentiality and used strictly for academic purpose.

Thank you for your cooperation.

SECTION A

1. Administrative Information

i. Local Government _____

ii. Village _____

iii. Community based organization (CBO) _____

iv. Date of interview _____

2. Socio-Economic Characteristics of respondent.

i. Age of respondent _____ (years)

ii. Sex of the respondent

(i) Male [ ]

(ii) Female [ ]

(iii) **Marital Status of respondent.**

(i) Married [ ]

(ii) Single [ ]

(iii) Window/widower [ ]

(iv) Divorced [ ]

(v) Separated [ ]

iv**. Educational qualifications of respondent**

a. Non formal education [ ]

b. Primary [ ] years spent _____ ___

c. Secondary [ ] _____

d. Tertiary [ ] years spent _____

e. Others, kindly specify _____ year spent _____

3. Household size of the respondent (i.e number of your household) _____

4. Number of Household members of the respondent.

   i. Number of female Adults _____

   ii. Number of male Adults _____

   iii. Number of children _____

5. Primary occupation of the respondent

i. Farming [ ]

ii. Trading [ ]

iii. Civil service [ ]

iv. Artisanship (e.g craft making,) [ ]

v. Others, kindly specify _____

6. Total income of the respondent per month (N/Month) _____

SECTION B

1. **Community Based Agriculture and Rural Development project (CBARDP) activities.**

i. As a participant of CBARDP do you know about CBARDP activities?

Yes [ ] No [ ]

2. Production Development / procurement. Select the following activities of CBARDP perform in your area (Note more than one activities can be selected).

(i) Provision of processing machines:

(a) Groundnut oil extractor [ ],

(b) Rice Huller [ ]

(c) Milling machines, ox drawn/cart ridgers [ ]

(d) Wet grinder [ ],

(e) Maize thresher [ ]

(f) Cassava processing equipment [ ]

(g) Dehuller [ ]

(h) Sewing machines [ ]

(i) Irrigation pumps [ ]

(j) Sprayers [ ]

(k) knitting [ ]

(l) storage bins [ ]

(m) Hatching machines [ ]

(n) Dryer [ ]

(ii) Livestock Provision

a. Sheep's [ ]

b. Goat's [ ]

c. Work bulls [ ]

d. Pigs Does/Boars [ ]

e. Fish [ ]

f. Poultry [ ]

(iii) Farm Inputs Provision:

a. Fertilizer [ ]

b. Improved seeds [ ]

c. Agro-chemicals [ ]

d. Construction of Apiaries [ ]

e. Seedlings [ ]

f. Rubber tanks [ ]

g. Fish feeds [ ]

(iv) Skills acquisition tools:

a. Plumbing tools [ ]

b. Barbing tools [ ]

3. Capacity Building

Select from the following training areas where you have benefitted,

(i) Animal Traction Training [ ]

a. Skills acquisition Training Tailoring Knitting Shoe Making [ ]

b. Plumbing [ ]

c. Barbing [ ]

d. Hair Dressing, Welding motor, mechanic [ ],

e. Soap making [ ]

f. Tie Dye [ ]

(ii) Training on farm production processing (select from the following you were provided training on):

a. Groundnut oil extraction [ ]
b. Rice Hulling [ ]
c. Milling [ ]
d. Grinding [ ]
e. Cassava [ ]
f. Processing [ ]

(iii). Training on Management of livestock [ ]

(iv). Training on Village development [ ]

(v) Training on crop production which include: MTPs, [ ], Adaptive research and crops trials [ ],

4. Community Development activities: (Select from the following which of these activities your community benefitted from):

a. Construction of feeder roads [ ]
b. Construction of Bore holes [ ]
c. Construction of Tube wells/wash bores [ ]
d. Home garden establishment [ ]
e. Interactive visits of farmers group to other states [ ]
f. Other activities specify _____

SECTION C

1. Income of the respondents in the project area.

Please enter your farm size for the following crops that are applicable to you

S/No	Crops	Farm Size	2014 quantity of output
1.	Maize		
2.	Cowpea		
3.	Soya beans		
4.	Yam		
5.	Cassava		
6.	Rice		
7.	Tomato		
8.	Pepper		
9.	Potato		
10.	Ginger		

2. What are your non-farm activities and income generated in the past one year (2014)?

S/No	Non-farm activities engaged in	Income derived
1.		
2.		
3.		
4.		
5.		
6.		

3. Fill in the number of livestock from below as it is applicable to you now and its approximate market value now.

S/No	Livestock/ fishery	Number	Unit value (approximate	Total value (approximate)
1.	Poultry			
2.	Pig			
3.	She goats			
4.	He goats			
5.	Rams			
6.	Sheep's			
7.	Fish			
8.	Ewes			

4. Do you sell your livestock? yes [ ] No [ ]

How many have you sold in the past one year (2014)? _____

How much did you realize from the sales? _____

5. Do you purchase any facility apart from the ones you have benefited from the prove it.

i. Yes [ ]

ii. No [ ]

6. If yes, what are they? _____

_____

_____

SECTION D

1. Which of the following crops are you cultivating and the quantity of output obtained in the last cropping season and from what area of land?

Rainfed Crops

S/No	Crops	2014 Quantity of Output	Area of Land
1.	Maize		
2.	Sorghum		
3.	Soya beans		
4.	Cowpea		
5.	Pepper		
6.	Potato		
7.	Ginger		
8.	Rice		
9.	Cassava		

Irrigated crops

S/No	Crops	2014 Quantity of Output	Area of Land
1.	Tomatoes		
2.	Onions		
3.	Cabbage		
4.	Maize		
5.	Pepper		
6.	Potato		
7.	Irish Potato		
8.	Spinach		
9.	Lettuce		
10.	Carrot		

SECTION E

1. What are the challenges you are faced with in the course of participation in CBARDP Activities?

i. _____

ii. _____

iii. _____

iv. _____

v. _____

vi. _____

vii. _____

viii. _____

DEPARTMENT OF AGRICULTURAL ECONOMICS AND RURAL SOCIOLOGY, AHMADU BELLO UNIVERSITY, ZARIA

RESEARCH QUESTIONNAIRE B (NON-PARTICIPANTS)

TOPIC: IMPACT ASSESSMENT OF COMMUNITY BASED AGRICULTURE AND RURAL DEVELOPMENT PROJECT ON THE PARTICIPANTS OUTPUT AND INCOME IN KADUNA STATE

Dear Respondent,

This questionnaire will be used by a student in the above-named department. Please, provide the necessary information required in the questionnaire which will be treated with utmost confidentiality and used strictly for academic purpose.

Thank you for your cooperation.

SECTION A

1. Administrative Information

v. Local Government _____

vi. Village _____

vii. Community based organization (CBO) _____

viii. Date of interview _____

2. Socio-Economic Characteristics of respondent.

iii. Age of respondent _____ (years)

iv. Sex of the respondent

(iv) Male [ ]

(v) Female [ ]

(vi) **Marital Status of respondent.**

(vi) Married [ ]

(vii) Single [ ]

(viii) Window/widower [ ]

(ix) Divorced [ ]

(x) Separated [ ]

iv**. Educational qualifications of respondent**

f. Non formal education [ ]

g. Primary [ ] years spent _____ ___

h. Secondary [ ] _____

i. Tertiary [ ] years spent _____

j. Others, kindly specify _____ year spent _____

7. Household size of the respondent (i.e number of your household) _____

8. Number of Household members of the respondent.

iv. Number of female Adults _____

v. Number of male Adults _____

vi. Number of children _____

9. Primary occupation of the respondent

vi. Farming [ ]

vii. Trading [ ]

viii. Civil service [ ]

ix. Artisanship (e.g craft making,) [ ]

x. Others, kindly specify _____

10. Total income of the respondent per month (N/Month) _____

SECTION B

7. Income of the respondents in the project area.

Please enter your farm size for the following crops that are applicable to you

S/No	Crops	Farm Size	2015 quantity of output
1.	Maize		
2.	Cowpea		
3.	Soya beans		
4.	Yam		
5.	Cassava		
6.	Rice		
7.	Tomato		
8.	Pepper		
9.	Potato		
10.	Ginger		

8. What are your non-farm activities and income generated in the past one year (2014)?

S/No	Non-farm activities engaged in	Income derived
1.		
2.		
3.		
4.		
5.		
6.		

9. Fill in the number of livestock from below as it is applicable to you now and its approximate market value now.

S/No	Livestock/ fishery	Number	Unit value (approximate	Total value (approximate)

1.	Poultry			
2.	Pig			
3.	She goats			
4.	He goats			
5.	Rams			
6.	Sheep's			
7.	Fish			
8.	Ewes			

10. Do you sell your livestock? yes [ ] No [ ]

How many have you sold in the past one year (2014)? _____

How much did you realize from the sales? _____

11. Do you purchase any facility apart from the ones you have benefited from the prove it.

iii. Yes [ ]

iv. No [ ]

12. If yes, what are they? _____

_____

_____

SECTION C

13. Which of the following crops are you cultivating and the quantity of output obtained in the last cropping season and from what area of land?

Rainfed Crops

S/No	Crops	2014 Quantity of Output	Area of Land
1.	Maize		
2.	Sorghum		
3.	Soya beans		
4.	Cowpea		
5.	Pepper		
6.	Potato		
7.	Ginger		
8.	Rice		
9.	Cassava		

Irrigated crops

S/No	Crops	2014 Quantity of Output	Area of Land
1.	Tomatoes		
2.	Onions		
3.	Cabbage		
4.	Maize		
5.	Pepper		
6.	Potato		
7.	Irish Potato		
8.	Spinach		
9.	Lettuce		
10.	Carrot		

SECTION D

1. Are you aware of the CBARD activities in your Community?

   Yes ( ) No ( )

2. If yes, what are those you know?

……

……

……

3. Do you benefit from the activities you knew above?

   Yes ( ) No ( )

4. How many of the activities do you benefit from?

……

……

……

5. What type of benefit do you derived from the activities?

……

……

……