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ACRONYMS

AMIS – Agricultural Market Information System

IFAD – International Fund for Agricultural Development

ADPs – Agricultural Development Programmes

CESDEV – Centre for Sustainable Development

FGN – Federal Government of Nigeria

FAO – Food and Agriculture Organisation

UNs – United Nations

VCDP – Value Chain Development Programme

OGSPMU – Ogun State Project Monitoring Unit

VCAPs – Value Chain Action Plans

VCA – Value Chain Addition

MDGs – Millennium Development Goals

SDGs – Sustainable Development Goals

ODK – Open Data Kit

WEAI – Women Empowerment Agricultural Index

IFDC – International Fertilizer Development Centre

TOT – Training of Trainers

ACKNOWLEDGEMENTS

My profound gratitude goes to my academic supervisor, Dr Olawale E. Olayide, for his patient guidance, valuable inputs, continued support and encouragement. I am extremely lucky to have a supervisor who cared so much about my work and gave a push whenever necessary. I offer my sincere appreciation for the learning opportunities provided by CESDEV.

The completion of this internship could not have been accomplished without the support of IFAD-VCDP, Ogun State, most especially the State Coordinator, Mr. Samuel Ogun, VCDP, Ogun State, for your unflinching support. My special thanks also goes to my on-site Supervisor, Mr. David Onigbinde (Project Monitoring and Evaluation Officer). I specially thank you for the guidiance and support throughout the field research. I am also grateful to other members of the Ogun State Project Monitoring Unit; Mr. Babatola Williams, Agroprocessing & Quality Enhancement Officer; Mr. Kunle Oyesanwen, Business & Market Development Officer; Mrs. Tope Ajisafe, Agriculture Production Officer; Alhaji. Yinka Amosun, Agriculture Production Officer; Mr. Kunle Olaniran, Value Chain Infrastructure Officer; Mr. John Idowu, Procurement Officer; Mrs. Abiola Sobukola, Rural Institutional Gender & Youth Mainstreaming Officer; Mr. Ibukun Faneye, Knowledge Management & Communications Officer; Mr. Festus Idowu, Admin Officer. I would also like to extend my appreciation to Mr. Oluranti Diyan, Technical Assitant, Monitoring&Evaluation for their support and guidance. I am grateful to all those with whom I have had the pleasure to work with during the internship period.

I am grateful to the members of my family and friends for their love, cooperation, inspiration, encouragement and support.

To my classmates, thank you all for always watching out for me.

My appreciation also goes to the Director, Centre for Sustainable Development (CESDEV), Prof. Olanrewaju Olaniyan, and entire staff of CESDEV, University of Ibadan.

Finally, I will like to thank the IFAD- MDP, not only for providing the funding but also for having a collaboration which offered me the platform to undertake this research. Sincere thanks also go to Dr. Lucia Rodriguez of the Earth Institute, Columbia University, United States of America.

Thank you all.

EXECUTIVE SUMMARY

The International Fund for Agricultural Development (IFAD) in partnership with the Federal Government of Nigeria (FGN) contrived the Value Chain the Development Programme (VCDP) to tackle the challenges facing agriculture in the country, knowing its potential if adequately harnessed. Agriculture contributed almost 40% to Nigeria's GDP in 2017. Smallholder farmers provide over 80% of the food consumed in the country, despite challenges. The farmers face the challenges of high cost of farm inputs, low productivity, poor access to market, poor processing technology, inadequate credit facilities and vicious cycle of poverty which has restrained them from increasing their income and an improved standard of living. IFAD and the Global Masters in Development Practice with its partner universities began a Win-Win field practicum grant for graduate students to conduct an assessment of its intervention in the host countries.

The broad aim of the intervention is to reduce rural poverty and achieve accelerated economic growth on a sustainable basis in the programme area. The research however had four objectives to assess the impact of the programme on the cassava and rice smallholder farmers. Since the Value Chain Development Programme was based on impact assessment, the objectives majorly focused on comaprisons. The first objective assessed the productivity level of farmers which include knowing the different input support given and compare the output after harvest. It compared the mean inputs used before the intervention and during the intervention. The mean of improved seeds and cuttings used before the intervention was 60kg and 557kg after the intervention, while for fertilizer, the usage increased by almost 45%. The garnered skills and knowledge used during land clearing and land preparation has contributed immensely to the upward trajectory in the production and income of the smallholder farmers. The second objective focused on farmer's income and possession of physical assets. It looked at income earned before and during the intervention and what physical assets they have owned due to increase in their income. Over 70% of the beneficiaries had their income increased to the point that their size of landed property, quality of dwelling unit, farm machinery, household increased by 50%. The third objective observed beneficiaries' access to market and improved services. It looked at opportunities available to the beneficiaries for access to sales of their products. A significant increase was recorded as over 50% of the beneficiaries had increased access to market which is evident in the increase in income. Services and trainings were conducted such the false bottom technique which improves the quality of rice and makes it more presentable to buyers.

The beneficiaries also had trainings on chemical application techniques. The fourth and last objective set out to determine the empowerment index of beneficiaries. The objective here was to look at the participation and incluion of women in agriculture in the study area. From findings, Men are more involved in agriculture than Women with 62% and 38% participation respectively. The empowerment index has five categories, namely; Production, Resources, Income, Time(workload and leisure) and Group membership. Another aspect of empowerment index considered was public speaking, which aims to deduce the freedom scale for men and women to speak in public and make their voice heard. More men are more comfortable to speak in public than women, while women speak with little difficulty and in some cases, they are are fairly comfortable.

The study was conducted in Obafemi-owode and Yewa North local government areas of Ogun state. A total of 329 cassava and rice smallholder farmers under IFAD VCDP were interviewed through online structured questionnaire. Focused group discussion and key informant inteviews were also conducted. The data gathered from respondents were analysed through descriptive and inferential statistics.

Studies revealed mean age of male farmers to be 47 years while female farmers is 45 years, in essence, the farmers are in their active and working age and their is less participation of youth in the occupation. Also, majority of the farmers had primary education and 95% of them are married.

It should be noted that, the partnership between the state programme coordinators and stakeholders helped to achieve many of the goals set by the organisation. Partnerships between input suppliers and equipment owners (service providers) helped to meet the needs of the smallholder farmers.

CHAPTER ONE - INTRODUCTION

1.1 Background to the study

The International Fund for Agricultural Development (IFAD) is a specialized agency of the United Nations (UNs), it was established as an international financial institution in 1977 as one of the major outcomes of the 1974 World Food Conference. It resolved that an International Fund for Agricultural Development should be established immediately to finance agricultural development projects primarily for food production in the developing countries with focus on alleviating poverty of the rural dwellers through investment in agricultural activities, as agriculture is seen in the developing countries as a sector with viable potential to move the rural poor out of poverty and with the capacity to feed the world. In sub-Saharan Africa for instance, maximizing the potential of agriculture would yield faster growth in reducing poverty than investment in other sectors, knowing the world population and the increasing demand, as population rises. The sub-Saharan Africa has enormous natural, physical and human potential, compared to the developed countries where the cost of producing food is becoming high and land is scarce. With the magnitutde of untapped resources in sub-Saharan Africa, the focus of the international community (Agricultural finance donors) has shifted from food aid to developing the capacity of the numerous smallholder farmers to increase their productivity. Africa has large expanse of land and with enough resources, agriculture would set a new pace for Africa's growth and development. The IFAD intervention maximizes the potential of smallholder farmers by exposing them to opportunities through inputs support, market access and services that would increase their farming yield, build their human capacity and consequently increase their income. Through low-interest loans and grants, IFAD works with governments to develop and finance programmes and projects that enable rural poor people to overcome poverty. Since starting operations in 1978, IFAD has invested US$14.8 billion in over 900 projects and programmes that have reached some 400 million poor rural people. Governments and other financing sources in donor countries, including project participants, contributed US$12.2 billion, and multilateral, bilateral and other donors provided approximately another US$9.6 billion in co-financing. This represents a total investment of about US$21.8billion.

The IFAD intervention in Nigeria is focused on Value Chain Development Programme (VCDP) because of the challenges faced by smallholder farmers such as low productivity, poor access to market, poor processing technology, lack of adequate information, high costs of farm inputs, inadequate credit system, the vicious cycle of poverty and the recent challenge which has seemed formidable; climate change. The partnership between the Federal government of Nigeria (FGN) and IFAD is focused on cassava and rice smallholder farmers, knowing the potential economic value of the staple crops if every challenge is removed from planting through harvesting to consumption. Also to achieve Nigeria's Agricultural Transformation Agenda which aims to increase production, reduce food imports and provide millions of new jobs for young people, as agriculture is seen as an alternative to the oil dependent economy that has not been able to deliver the country from economic, social and other challenges bedevilling the nation. Over 80% of the total farming population in Nigeria are smallholder farmers cultivating less than 5 hectares in the rural areas producing about 95% of the total national output, yet poverty still remains a rural phenomenon with two-thirds of the total population considered poor.

The Value Chain Development Programme is a development initiative which is an approach to tackle the challenges faced by smallholder farmers. The six-year programme is aimed at improving cassava and rice value chains in six states, namely; Anambra, Benue, Ebonyi, Niger, Ogun and Taraba by proffering solutions to low productivity, limited access to productive assets and inputs, paucity of opportunities for value addition, inadequate support services such as extension services and research, inability to access rural financial services, inadequate market and rural infrastructure. The IFAD/FGN adopted the value chain approach to enhance productivity, promote agro-processing, access to markets and opportunities to facilitate improved engagement of the private sector and farmers'organisations. The programme, through commodity-specific Value Chain Action Plans (VCAP) at different local governments in the participating states engages with actors along the chain – producers, processors, marketers and their farmer organisations as well as public and private institutions, service providers, policy and regulatory environment to deliver relevant and sustainable activities that would lead to gradual transformation of the sector and contribute to achieving food security, expand income-generating activities and employment opportunities.

The research was conducted in 2 out of 5 implementing local government areas of Obafemi-Owode and Yewa North in Ogun state and the aim was to assess the impact of IFAD-VCDP on the smallholder farmers. From all indications during the field research, IFAD-VCDP has contributed to the increased standard of living of smallholder farmers in the area as they all could attest to provision of farm inputs, improved market access and linkage to extension services, participation in trainings e.t.c which has increased their human capacity. For effective cordination and monitoring of the intervention, the implementing state (Ogun state) ensured every farmer belonged to a farmer organization and existing ones were also recognised and adjusted to suit the *modus operandi* of the intervention.

Furthermore, Ogun state is known to consist of traditionally agrarian population of cassava and rice farmers thereby making it a high focus on supporting crop producers in the enterprise unit. However, due to the development initiative that was contrived for Nigeria – VCDP, other actors in the enterprise unit (processors and marketers) were also catered for in order to achieve value addition. Producers were supported to maximize their lands to increase their yields, the capacity of processors were also increased through mechanical processing facilities and refined methods of processing to meet the supply from producers and the marketers also, now have access to offtakers, who readily buys their products. It should be noted that these farmers had at one time or the other participated concurrently in the three enterprise unit. For easy access and coordination of the intervention, the smallholder cassava and rice farmers were divided among the enterprise unit with producers having the highest number of farmers in their respective organizations.

The research was conducted to follow the existing operation and out of the total smallholder farmers of 2,243 in the two study local government areas, 329 were purposely selected consisting the two crop enterprise and the three enterprise unit. In the following sub-chapters and chapters, more will be discussed about the research and the study area.

1.2 Problem Statement

The value chain describes the full range of activities that firms and workers do to bring a product from its conception to its end use and beyond (WBCSD, 2011).The three main pillars of the

Value Chain Additon (VCA), namely production, processing and marketing of the produce, are the main aspects that relate directly to the food security framework. The reason for the existence of a value chain is that goods, services or information are passed on to the different actors.

Low productivity undermines potential food production and stifles income quality and keeps many farming families improverished, hungry and undernourished. Inability to access capital to buy modern agriculture inputs reduces productivity yield of smallholder farmers

Knowing how much we rely on farm produce for our daily consumption, and the process or efforts put into production, marketing and distribution; farmers' livelihood hasn't been improved evenly and therefore, some still leave below the poverty line. Through value addition interventions, it seems promising for their livelihood to be improved.

Social exclusion is a problem faced by many in the society. In the Agricultural industry, women are often-times excluded and marginalized in productive activities, access to resources and ownership of assets, decisions on income, leadership positions and time management.

1.3 Justification of the Study

Agriculture is the primary source of income for the rural population in developing countries. Towards the end of 2015 which saw the close of the Millennium Development Goals (MDGs), there was still uneven progress towards achievement of Goal 1 of the MDGs – Eradicating extreme poverty and hunger, due to endemic inequalities in the developing world. The prevailing nature of such inequalities make people living in these countries one of the most vulnerable demographic categories.

Smallholder farmers are at higher risk of economic inequality, and generally represent the poorest segment of the population in developing countries, because they are at risk of environmental degradation, lack of access to input and market, technology and capital which has made it harder to lift the smallholder farmers out of poverty. With the increasing pressure on natural resources due to climate change and population growth, small-scale agriculture is one of the best tools to ensure global food security. Small-scale farming has proven sustainability benefits and studies show that smallholder farmers play an important role in poverty reduction.

The **question** for stakeholders in development practice then is, **how** to help minimize the risks and maximize the opportunities of small scale agriculture.

In this age of sustainable development where there are refined policies and new development strategies to tackle the present challenges still faced by smallholder farmers, there is high premium on partnership forging to ensure inclusiveness of all stakeholders in proferring sustainable solutions that would bring about agricultural transformation and proffer solutions to world problems. **Partnership for the goals** is the seventeenth goal of the Sustainable Development Goals (SDGs) which calls on strategic partnerships in a bid to achieve other goals. IFAD is one of the very relevant partners with strategies to ensure sustainable agricultural practices and considering its core mandate which is to alleviate rural poverty, conducting an assessment to know the impact of the organization in developing countries is necessary as it reveals the impact, challenges faced and gaps to be filled.

Improving farmers' access to consumer market has the potential to promote development outcomes by generating revenue to cover costs related to education, health and infrastructure. Moreover, market-driven approaches provide opportunities for collaboration between farmers, government bodies and agribusiness that enables farmers to adopt more sustainable practices.

1.4 Objectives of the Study

The overarching goal of the programme is to reduce rural poverty and achieve accelerated economic growth on a sustainable basis in the programme area. The programme aims to directly improve the livelihood of 15,000 smallholder farming households, 1,680 processors and 800 traders involved in cassava and rice production. Value chain development focuses on analyzing these chains, identifying key weaknesses and bottlenecks and contributing to their further development and improvement. The broad objective of this study is to appraise the impact of IFAD value chain development programme on smallholder farmers' welfare in the state.

Specific objectives

- To assess the productivity level of beneficiaries.
- To evaluate the level of farmer's income and possession of physical assets.
- To identify beneficiaries' access to market and improved services.
- To determine the empowerment index of the beneficiaries.

Table 1 - Analysis of Objectives of the Study

S/N	Objectives	Data Collection	Data Required	Analytical tools
1	To assess the productivity level of beneficiaries	Use of structured questionnaires and project data	productivity level and inputs assessed and productivity outputs	Frequencies, percentages, charts, cross tabulation and correlation test.
2	To evaluate the level of farmer's income and possession of physical assets	Use of structured questionnaires and project data	Information on income, physical and financial assets	Frequencies and percentages
3	To identify beneficiaries' access to market and improved services.	Use of structured questionnaires and project data	Information on access to market and improved services	Frequencies, percentages, charts, cross tabulation
4	To determine the empowerment index of the beneficiaries	Use of structured questionnaires	Empowerment domains (prodution, resource, income, time, leadership)	Descriptive statistics (frequency count, tables and charts) and Women Empowerment in Agriculture Index (WEAI)

1.5 Research Hypothesis

Ho: If farm production is related to seeds input, then increased access to seeds input will lead to higher productivity.

Ho: If sales is related to availability of market, then access to market will lead to higher sales.

1.6 Definition of Concepts

1. Smallholder Farmers: Smallholder farmers are often referred to small scale farmers with less access to resources to farm. Small scale farmers are defined as those farmers owning small-based plots of land on which they grow subsistence crops and one or two cash crops relying almost exclusively on family labour. (DAFF, 2012)

2. Value Chain: Value chain development describes the full range of activities which are required to bring a product or service from conception, through the different phases of production (involving a combination of physical transformation and the input of various producer services), delivery to final consumers, and final disposal after use. These includes activities such as design, production, marketing, distribution, and support services up to the final consumer (and often beyond, when recycling processes are taken into account). (WBCSD,2011)

1.7 Limitation of the Study

The use of online structured questionnaire through the Open data kit application caused a little challenge has the enumerators had to be trained on its use asides the usual familiarisation with the questionnaire.

CHAPTER TWO - LITERATURE REVIEW

2.1 Theory and Concepts

The existence of peasant economies and societies have dominated three-quarters of the past millennium. It is only in the last two hundred years, as the industrial revolution took hold and fanned out to other parts of the world that peasant populations started loosing their determining influence over mass culture. And it is only very recently that they have relinquished their demographic majority worldwide (Cipolla 1979). Their numbers are currently concentrated in the continents of Africa, Asia and Latin America where they continue to lend economic, political and cultural body to their respective nation-states. Curiously, over the past two decades peasants have been slipping from the political and academic gaze. Preoccupation with peasant politics during the 1960s, has given way to a reconceptualisation of peasants as 'smallholders', rational economic agents seeking material betterment through participation in agricultural commodity production

The World Wars and the Cold War served to divert the world's attention from peasant economies. Debate about the nature and role of peasant societies in modern nation states did not revive until the 1960s and early 1970s. Two world wars and one world-wide depression had led to an uneasy awareness of global inter-dependence despite vast material and cultural differences between the first, second and third world nations. But it was a time of optimism in which the inequities existing between these three divisions were anticipated to decline through economic growth. From the mid-1950s to the early 1970s, international prices for primary commodities produced in the third world were relatively buoyant. Relations between the first world and third world were slated to be those of cooperation, while first world-second world relations froze into Cold War wariness. Peasants had largely vanished in the first world. In the second world, peasantries were waning under socialist policies that favoured collectivization and large-scale state farm production. By contrast, as the third world neared the end of colonial rule, national head counts revealed peasants in an overwhelming majority in most countries. Peasant uprisings

in the de-colonization process, further fueled by neocolonial designs and super-power rivalry as exemplified by the Vietnam War.

Smallholders in Development economics, emerging as a specialized sub-discipline of economics following World War II, focused on patterns of third world economic growth. The 1950s offered economists different economic conditions from those that had prevailed during the depression and the war. The global economy was expanding amidst the breakup of the colonial world and its refashioning into independent developing countries. It was an era of optimism, in which development economists carved out an active advisory role for themselves in the policy formulation of new nation-states. The relative weighting of neo-classical and Keynesian influences on the discipline affected individual economists' normative judgements about the positive and negative roles of the state and market in development. However, development economists were united in their strong adherence to a positivist methodology, mathematical data analysis and model-building that had gained relevance in the post-war western social sciences. Normative judgements were lodged behind model-building assumptions, hypothesis-testing and use of estimated constant variables. The term peasant, although never explicitly rejected by development economists, was generally avoided. Rather smallholder was used to denote rural producers operating on their own account on relatively small farms. In this way, the class and family criteria of the peasantry definition outlined earlier were largely reduced. Attention was deflected from the fact that rural producers are politically subordinated in state and market relations, or that their work pattern derives from family subsistence as well as profit-maximization.

Smallholders' low productivity, relative to other sectors of the economy and urban areas, was the starting premise for development economists. The development trajectory was unquestionably that of moving from agrarian to industrial-based national economies. Smallholders' role in economic development was conceptualized along the lines of Preobrazhensky: A widespread view that agricultural progress is necessary in order to supply, firstly, a surplus of labour for industry, secondly, a marketable surplus of food for industrial workers and, thirdly, an investible surplus of savings for urban industry (Streeten 1981 p.12). Development economists' vision of peasant smallholders' transitional role in development was premised on classical concepts of market optimization. Peasant participation in world commodity markets would spur improved

agrarian labour productivity and capital investment in agricultural technology. However, in practice their labour optimization and technology acquisition proved to be more problematic than the theory suggested.

It should be noted that smallholders' commodity export and the quest for surplus Myint (1958) updated Adam Smith's free trade argument, countering the view that the newly formed nation-states of the third world were necessarily disadvantaged in the exchange of primary commodities for manufactured goods from industrialized countries in the nineteenth century when so many of them became involved in the export of peasant-produced commodities. Firstly, international trade overcomes the narrowness of the home market and provides an outlet for the surplus product above domestic requirements. This develops into what may be called the 'vent for surplus' theory of international trade. Secondly, by widening the extent of the market, international trade also improves the division of labour and raises the general level of productivity within the country. This develops into what may be called the 'productivity' theory. Myint argued that the employment of surplus resources provided positive benefits to peasant producers largely by virtue of their self-sufficiency in subsistence production. It was assumed that peasants start with some surplus resources which enable them to produce the export crop in addition to their subsistence production. Here the surplus resources perform two functions: firstly, they enable the peasants to hedge their position completely and secure their subsistence minimum before entering into the risks of trading; and secondly, they enable them to look upon the imported goods they obtain from trade in the nature of a clear net gain obtainable merely for the effort of the extra labour in growing the export crop. Both of these considerations are important in giving the peasants just that extra push to facilitate their first plunge into the money economy. However, the means to this end was contested during the 1960s and 1970s when the issue of agricultural versus industrial-led development arose in reaction to Mao’s revision of Chinese policy towards its peasantry (Singh 1979). This debate was essentially about tactics and timing rather than challenging industrialization as the development goal. Bauer (1954) documented the entry of West African and Malayan peasants into commodity production for the world market, taking a highly critical stance against what he termed the western guilt syndrome.

Since the middle of the nineteenth century commercial contacts established by the West have improved material conditions out of all recognition over much of the Third World, notably in

South-East Asia, parts of the Middle East, much of Africa, especially West Africa and parts of East and Southern Africa; and very large parts of Latin America. Before 1890 there was no cocoa production in the Gold Coast or Nigeria, only very small production of cotton and groundnuts, and small exports of palm oil and palm kernels. By the 1950s these had become staples of world trade. They were produced by Africans on African-owned properties. Over this period imports both of capital goods and of mass consumer goods for African use also rose from insignificant amounts to huge volumes. The changes were reflected in government revenues, literacy rates, school attendance, public health, life expectations, infant mortality and many other indicators (Bauer 1981: 71-2). In contrast to this rosy view of benefits accruing to peasants from their production for the world market, Raul Prebisch (UN Economic Commission for Latin America 1950) pointed to the 36 per cent decline in terms of trade between primary-producing and industrial countries from 1876 to 1938. The trend was analyzed, updated and termed unequal exchange by Emmanuel (1972) and Evans (1975). The underlying assumption of classical political economy regarding the overall benefit of trade was being undermined by certain empirical facts of the nineteenth and twentieth century world market. As W.A. Lewis observed, agricultural productivity was higher in industrialized countries than in the so-called 'agricultural countries' resulting in distorted interpretations of comparative advantage. It came to be an article of faith in Western Europe that the tropical countries had a comparative advantage in agriculture. In fact, as Indian textile production soon began to show, between the tropical and temperate countries, the differences in food production per head were much greater than in modern industrial production per head (Lewis 1978). Third world countries' trade in agricultural commodities in spite of the lower productivity of their agricultural sectors relative to industrial countries produced many paradoxes. Lewis (1978) argued that this productivity differential played a part in worsening the third world's terms of trade because world prices for crops exported by tropical countries declined as the opportunity costs of smallholder labour cheapened. Third world opportunity costs of labour were reduced by population growth and the importation of cheaper food from industrialized countries. With the substitution of imported food for locally grown staples more smallholder farmers grew more export crops and through competition with one another drove export prices down further in the face of inelastic demand for smallholders' exports in the industrialized countries. Nonetheless, despite their disadvantaged trading position, Lewis believed that the world market afforded a means for smallholders to lift themselves out of

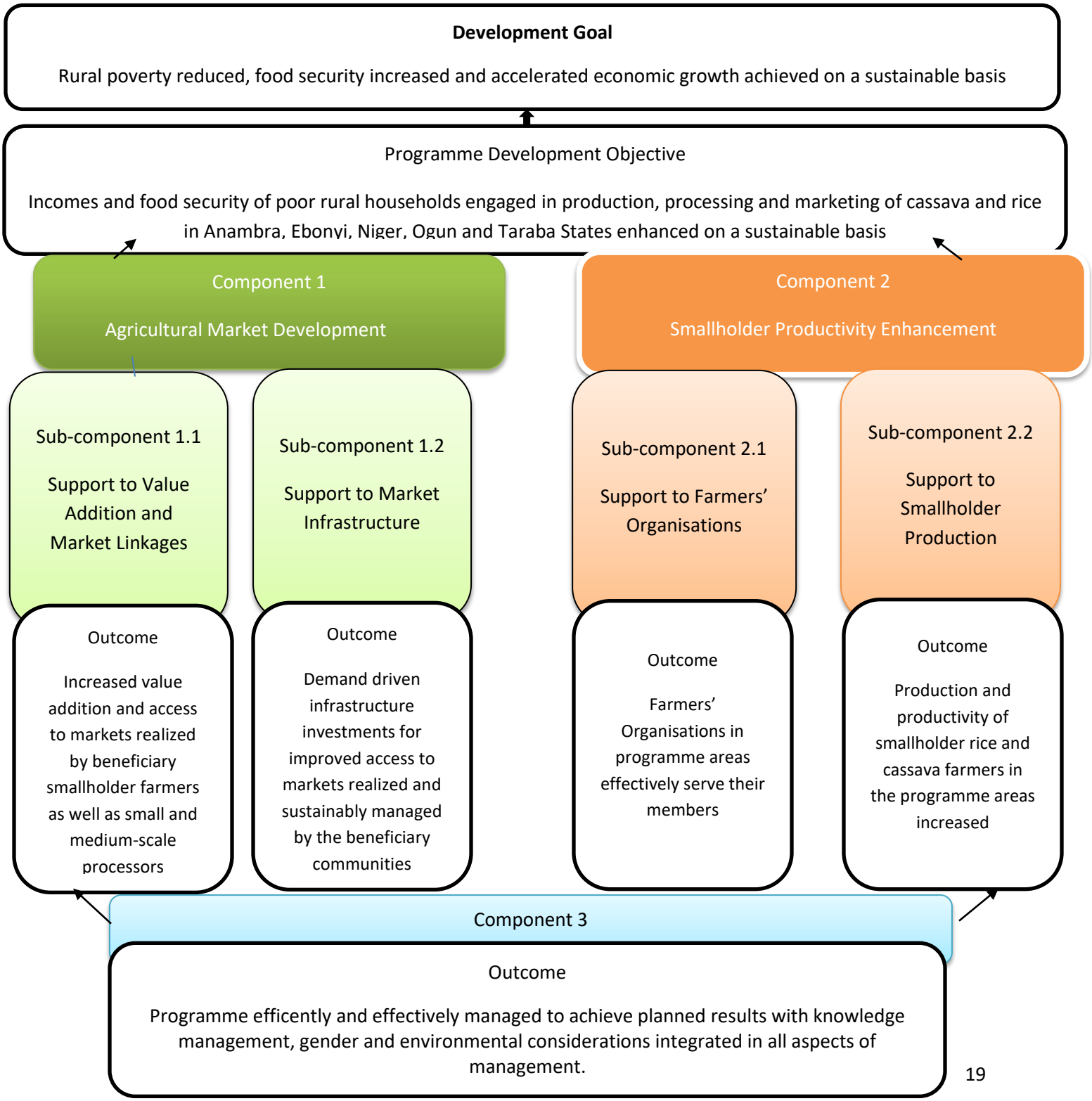
stagnant subsistence production. As the above indicates, the economic development literature recognized, but debated the extent of, value transfers from peasant commodity production through primitive accumulation on the part of third world governments' or international markets' unequal exchange. In so doing, development economists inadvertently affirmed the notion of peasants as a subordinated class. Their provison, in line with Lewis, was that commodity-producing smallholders were better off than if they had no relations with the market.

Smallholder farming intensive agriculture tends to increase the centrality of the family unit or household as a cooperative work group which allocates tasks on the basis of gender and age, acquires and transmits ecological knowledge across generations and develops a work ethic. The household thrives on the basis of closed contracts between its members, and acts to reduce the transaction costs associated with labour. The smallholding relies on the household, providing ownership and stability over time, there is also a tendency for houselhold size to adjust to the size of the landholding. It is argued that the advantages provided by the smallholder farming arrangement normally allow it to compete with collective, communal or industrial forms of organization, because of the close family control that ensures its existence, even given the disunity created by unequal access to power by different genders and age groups.

Smallholders are generally more productive per unit of total area than either large farms or shifting cultivators, but this intensification requires substantial labour inputs, and results in a considerable amount of time required. Netting argues that both plows and irrigation are labour-absorbing technologies. Intensive smallhold farms, unlike industrial farms, are sustainable at high levels of continued production, even under conditons of capitalism and economic growth.

Smallholders usually hold their most productive land as private property, while less intensively used land is more likely to be held as commons under institutions of group control.

2.2 Conceptual Framework Source: Programme Implementation Manual (VCDP)



2.3 Emperical Findings

Africa's small holder farmers are unique in that they generally have access to free land (mostly communally held or inherited) or land used at a relatively low cost. The free/low cost land provides farmers with a significantly lower cost structure (Akinsuyi, 2011). Knowing that majority of these farmers have access to lands, government need not do much in setting up the farmers on a land, but to ensure the land is maximized with the provision of resources needed. Nigeria has a land area of 98.3million hectares, with 74million hectares good for farming; half of its arable land has not been exploited to produce crops and livestock to curb the threat of hunger and poverty through efficient production system (Opara, 2011). It is obvious that from growth point of view, opportunities exist in Africa's Agriculture sector and with favourable operating environment, their productivity will match up the untapped resources. The smallholder farmers deserve more support to produce more food, grow more raw materials for the agro-industrial sector and contribute in ending food supply deficit that costs the country US$10 million in food import annually.

Furthermore, a characteristic feature of the agricultural production system in Nigeria is that a disproportionately large fraction of the agricultural output is in the hands of these smallholder farmers whose average holding is about 1.0 – 3.0 hectares and according to Federal Office of Statistics (1999), smallholder farmers are farmers whose production capacity falls between 1.0 and 4.99 hectares holding.

There is very limited access to modern improved technologies and their general circumstance does not always merit tangible investments in capital, inputs and labour. Agriculture sector being a major employer in Nigeria not-withstanding yet provides a decreasing contribution to National Gross Domestic Product (GDP). Certain factors are responsible for these inefficiencies in small scale farming in Nigeria. This has come about through the persisting dry conditions that small holder farmers experience. These farmers lack agricultural information and this is a factor that promotes ignorance of modern farm technologies in the farmers hence the constraint requires more attention than it now gets. These farmers also operate under high costs of production that affects both the commercial and smallholder farmer and most importantly other constraints against small holder farmer. Smallholder farmers in Nigeria have limited access to credit facilities which reduces their productivity to a great extent. In spite of the fact that Nigeria has a

lot of cultivable land, a great percentage of it is being converted to other uses than agriculture. One of the most destructive factors that hinder productivity in smallholder farming is lack of market which impoverishes and discourages them from production. In addition to these challenges, Obiechina (2012) points out that the main reason for poor performances of smallholder farmers is due to lack of commitment by all tiers of governments to implement the right policies.

CHAPTER THREE – METHODOLOGY

3.1 Study Area

Ogun State is in southwesten Nigeria. It was created in February 1976 from the former Western State. It borders Lagos State to the south, Oyo and Osun states to the north, Ondo to the east and the Republic of Benin to the west. Abeokuta is the capital and largest city in the state. The state is also known as the "Gateway to Nigeria".

Table 2 – Socio-economic characteristics of the study area

Features	**Statistics**
Land area	16,980.55km^2
Population from 2006 census	3,751,140million
Gross domestic product	$10.47billion
GDP per capita	$2,740

Figure 1 - Map showing Obafemi-owode local governmnts in Ogun state

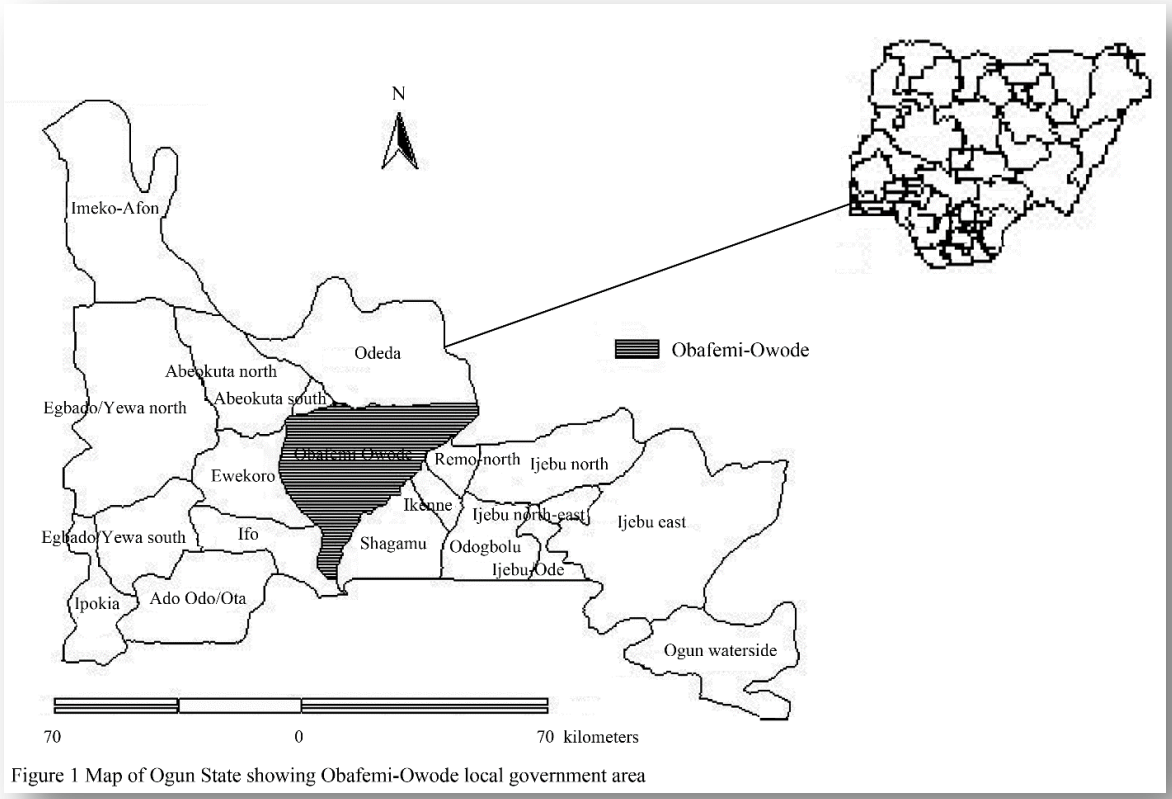
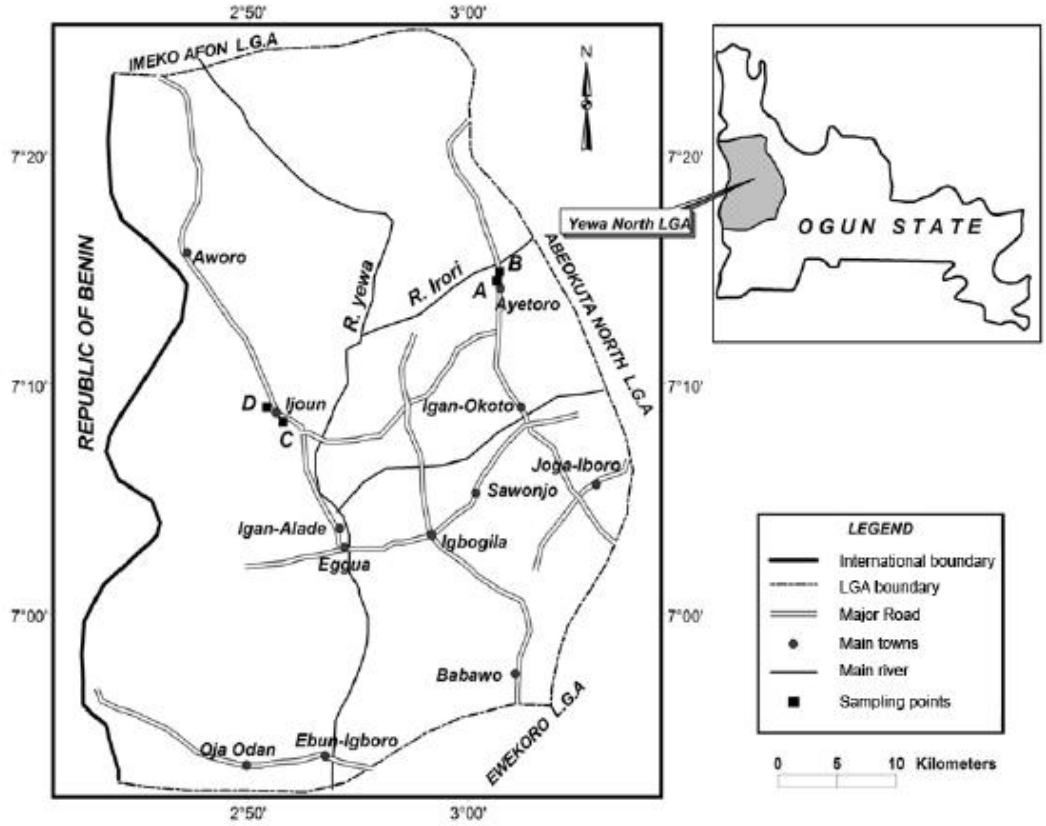


Figure 1 Map of Ogun State showing Obafemi-Owode local government area

Socio-Economic Data (http://yeso.ogunstate.gov.ng/news/Govspeech.pdf) (NBS)

Figure 2 – Map showing Yewa North local government in Ogun state



https://www.researchgate.net/figure/The-Map-of-Yewa-North-LGA-Ogun-State-Nigeria-A-river-Bareke-B-Irori-C-Idi-D_fig1_268207299

3.2 Method of Data Collection and Sources of Data

As earlier stated, the research was conducted in 2 out of 5 implementing LGAs of Obafemi-owode and Yewa North. The coordinates of project sites and research locations were taken with the pictures of respondents. The data were collected through quantitatve survey methods (Online structured questionnaire – **Open data Kit - ODK**) was used. The structured questionnaire was pre-tested before the research commenced. Qualitative survey method was also used through Focused Group Discussions (FGDs) and Key Informant Interviews (KII).

Table 3 – Population distribution and Sample size

Enterprise Unit	**LGA**	**Population Size**	**Sample size**	**LGA**	**Population Size**	**Sample Size**
Cassava Producers	**OBAFEMI-OWODE**	1162	170	**YEWA NORTH**	487	71
Processors		139	20		109	16
Marketers		9	1		15	2
Rice Producers		226	33		65	10
Processors		10	2		11	2
Marketers		5	1		5	1
Total		**1,551**	**227**		**692**	**102**
Population size total – n2,243.			**Sample size total – n329.**			

The table below represents the breakdown of the farmer organisations where the beneficiaries in the different enterprise units were interviewed.

Data collected includes; Socio-economic data, producitivity and income level, Market access and improved services, empowerment data. Asides primary data that was used for the research,

secondary data was also used such as the baseline study and mid-term review conducted by the state.

Table 4 – Distribution of Farmer organisations interviewed

Obafemi-owode – Community	**Farmer Organisation**	**Yewa North-Community**	**Farmer Organisation**		
Owode	3	Ayetoro	7		
Kabapo	2	Sawonjo	4		
Alapako	2	Eggua	3		
Obafemi	2	Igbogila	1		
Baara	1				
Sowunmi	1				
Mokoloki	1				
Owode Siun	1				
Ajana-odo	3				

3.3 Analytical Methods/Techniques

The data collected were coded and analyzed using Statistical Package for Social Sciences (SPSS-Statistics IBM 20). Both qualitative and quantitative data were generated for the study and represented on charts and tables. Descriptive statistics, frequencies and cross tabulations will be used to describe the socio-economic characteristics, Objective 1 - the productivity level, Objective 2 - income level and assets, Objective 3 - beneficiaries' access to market and Objective 4 -empowerment index.

CHAPTER FOUR - RESULTS AND DISCUSSION

4.1 SOCIO-ECONOMIC CHARACTERISTICS

4.1.2 Gender distribution of beneficiaries by Enterprise unit

This topic sheds light on the participation of Men and Women in Agriculture generally and specifically, according to the enterprise unit studied. It shows that overall, Men are still more involved in Agriculture but according to the enterprise units, there are more Women in the processing and marketing chain than Men as shown as 12% and 1.52% against 1.3% and 0% respectively. This is not the case when we look at production, as 61% of Men against 23% of Women produce. However, the participation of women has increased overtime.

Furthermore, a look at the marital status of the study area showed that 95.7% of the population are married and one can infer that, their Men go to the farm while majority of their Women stay at home and process these crops while handling the homefront. It should also be noted that from the large married population, one can deduce a sense of submission and respect from the Women to their Men, while the Men display their sense of responsibility by fending for the family.

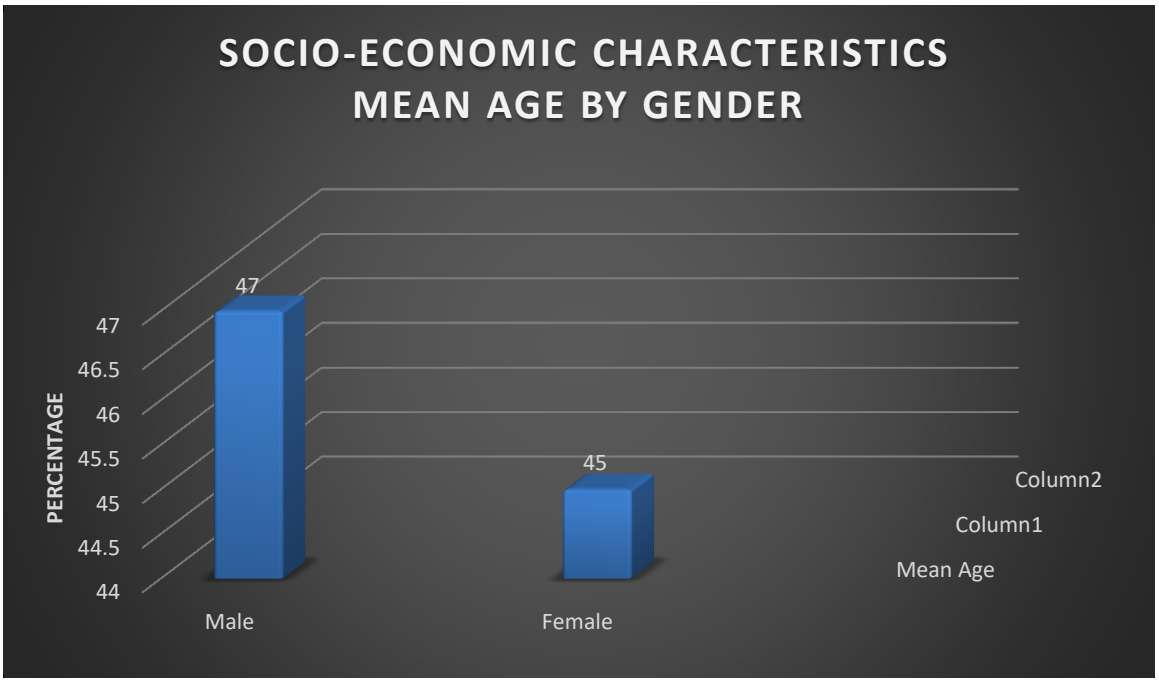
Table 5 - Display of gender distribution of beneficiaries by Enterprise unit

Variables	**Male**	**Female**
	%	
Production	61	23
Processing	0.3	12
Marketing	0	1.52
Total	**62%**	**38%**

4.1.3 Mean Age by Gender beneficiaries

The ages of the male beneficiaries ranges between 26 years and 68 years and the mean age is 47 years while the female beneficiaries' ages ranges between 20 years and 70 years and the mean age is 45 years. The beneficiaries are in their middle age and this signifies that they are in their active and working age where they are largely productive, thereby striving to move out of poverty and ensure a better livelihood. One can also deduce from this result that there is less participation of Youth in agriculture as it is been perceived as a tedious task – drudgery. This decline in youth participation has made the middle age (both male and female) the driving force of agriculture in the study area. It can also be deduced that these generation of farmers, grew up into the farming occupation engaged in by their parents and knowing they are in the rural communities, agriculture seems to be the viable occupation or option to move out of poverty in the locality.

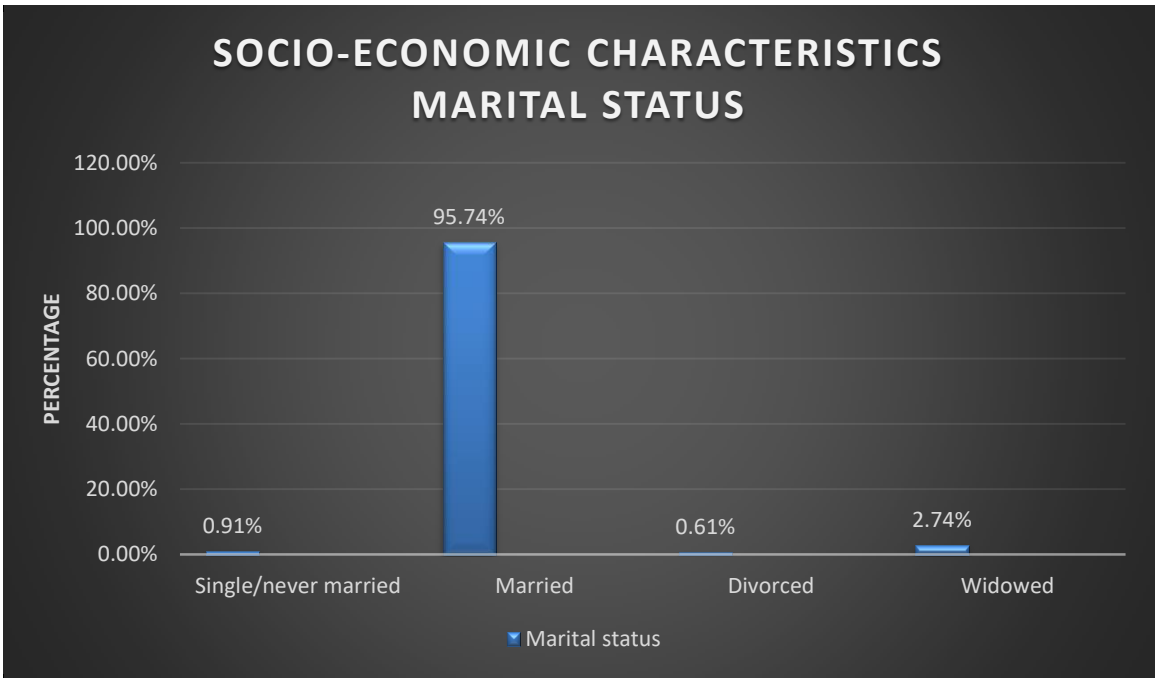
Figure 3 – Mean age by Gender



4.1.4 Marital Status of the Beneficiaries

It is observed below that 95.74% of the beneficiaries are married. Farming in rural areas places premium on home help and for this, it can be said that the people get married and give birth to increase the labour force for farming activities. Also, due to their low level of education, there might be cases of early marriage as a result of unwanted pregnancies and the ladies would end up getting married as abortion is not allowed or scary for them. Early marriages might also occur because the communities are closely knit and some community dwellers with a large household might want to marry off their daughters to a neighbour whom they grew up together to relieve the burden on the family. It should be noted that the African culture place a high value on marriage as it depicts some level of responsibility and maturity.

Figure 4 – Marital status percentage distribution



4.1.4 Levels of Education by Gender

The major focus here is the primary and secondary education completed by both male and female gender. The percentage of males who completed primary education is 22.5% while that of female is 15.2%. In the same vein, males with completed secondary education is 16.4% and female is 6.1%. These findings points to the need for **girl child education**, as the inclusion of women in education helps to control overpopulation, gives rise to better trained children, more of good values parading the society and poverty reduction. With more girls in school, it reduces the rate of child mortaility as abortion is prevented in case of unwanted children after dropping out of school and under age 5 deaths because of malnutrition. Maternal mortality and early marriage is reduced when there are more female children/teenagers in school.

On an overall scale however, it can be deduced that 22.5% and 15.2% of male and female respectively had completed primary school as their highest level of education in the study location, as against 16.4% and 6.1% male and female who completed secondary education. Post-secondary education(Polytechnics, Colleges, Universities) recorded the lowest percentages with 4 and 1.52 of male and female respectively. This necessitates a need for sensitization in the rural communities about the essence of Education and not just confine their children to been a helper in the farm. . Educated youths involvement in agriculture will introduce innovative techniques and novel ideas to improve farming practices, thereby making it an attractive profession and less tedious, as initially perceived. It also brings to the fore, the need for more strategies to improve the standard of living of these farmers , so they can afford educating their children.

Table 6 – Display of the level of education of beneficiaries

Variables	**Male**	**Female**
	%	
No Formal Education	7.6	7
Primary Education not completed	2.4	2.4
Primary Education completed	22.5	15.2
Secondary Education not completed	8.8	6.1

Secondary Education completed	16.4	6.1
Post-secondary Education (Years)	4	1.52

4.2 Result of Objective 1 – Assessment of productivity level of beneficiaries

4.2.1 Method of Land Preparation

The techniques of land preparation were enumerated as part of input accessed by producers in the above section. From the chart below, a total of 284 producers (cassava and rice) benefitted from the intervention and it was recorded that 65% beneficiaries had access to mechanized farming. These underscores the improvement in their farming practices. It also shows that the producers saw the benefits of mechanized land prepapration, as opposed to the manual land preparation being engaged in previously.

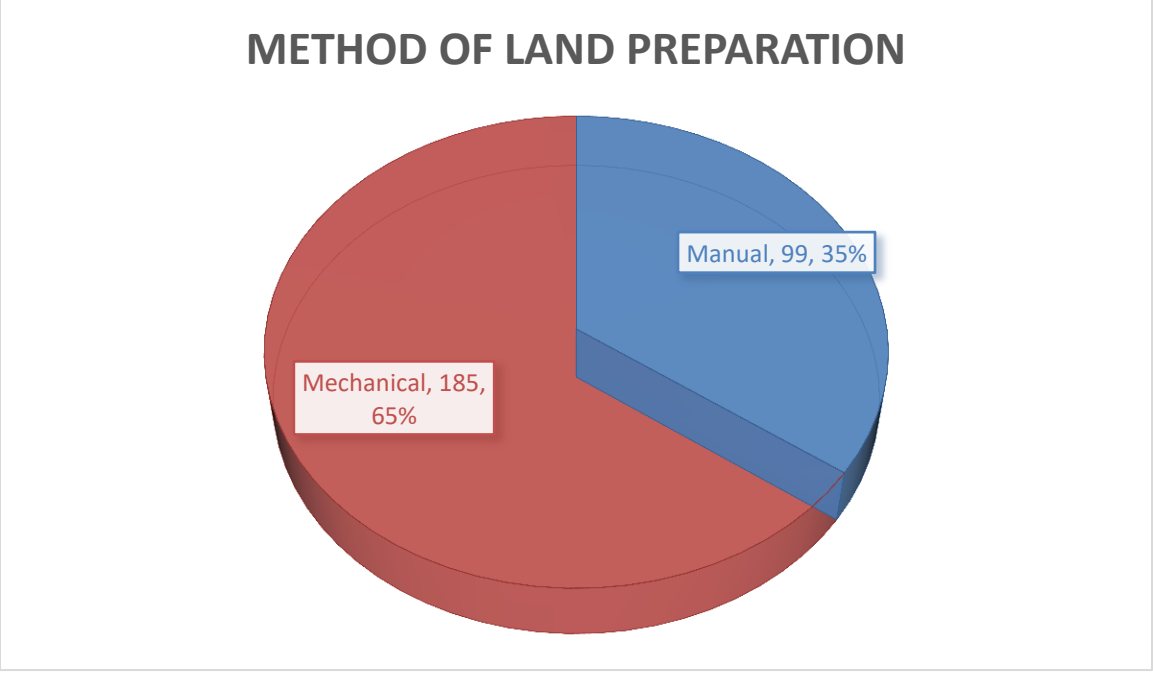


Figure 5 – chart showing the method of land preparation adopted by smallholder farmers

4.2.2 Mean Quantity of Production inputs

This section explains the inputs accessed by the beneficiaries before and during the International Fund for Agricultural Development (IFAD-VCDP) intervention. The range of improved seeds/cuttings used by the beneficiaries before VCDP was 20kg and 1500kg and the mean was 366kg, during VCDP the mean was 577kg ranging from 0.6kg and 2500kg. As for fertilizer, the mean before VCDP was 128.75kg at the range of 4kg and 450kg while during VCDP, there was increased use resulting in mean of 326.05kg. The use of agrochemicals also increased during VCDP with a mean of 13.12kg at the range of 2kg and 40kg compared to before VCDP where the mean is 6.09kg. Clearing of land also recorded a difference as the mean increased from 0.926ha before VCDP to 1.725ha during VCDP and this positive change can be accrued to the use of machines. The mean of size of land prepared increased also from 0.919ha to 1.630ha during VCDP as a result of the trainings the beneficiaries received on agrochemicals application which majority of them accepted they have been applying wrongly and caused some of their plants to dry up before maturation. This is a confirmation that all the beneficiaries did not just acquire more land and acquire other assets because of increased income, but they also added knowledge and could increase their capacity to serve as Training of Trainers (ToT).

Table 7 – Display of the mean distribution of production inputs

(kg)	**QuantitybeforeVCDP**	**Price before VCDP**	**Quantity during VCDP**	**Price duringVCDP**
Improved seeds/cuttings	366	19179.23	577	42188.20
Fertilizer	128.75	18670.77	326.05	41634.86
Agrochemicals	6.09	13412.15	13.13	30422.18
Land clearing	0.926	16710.92	1.725	31827.48
Land Preparation	0.919	16120.42	1.630	30621.48

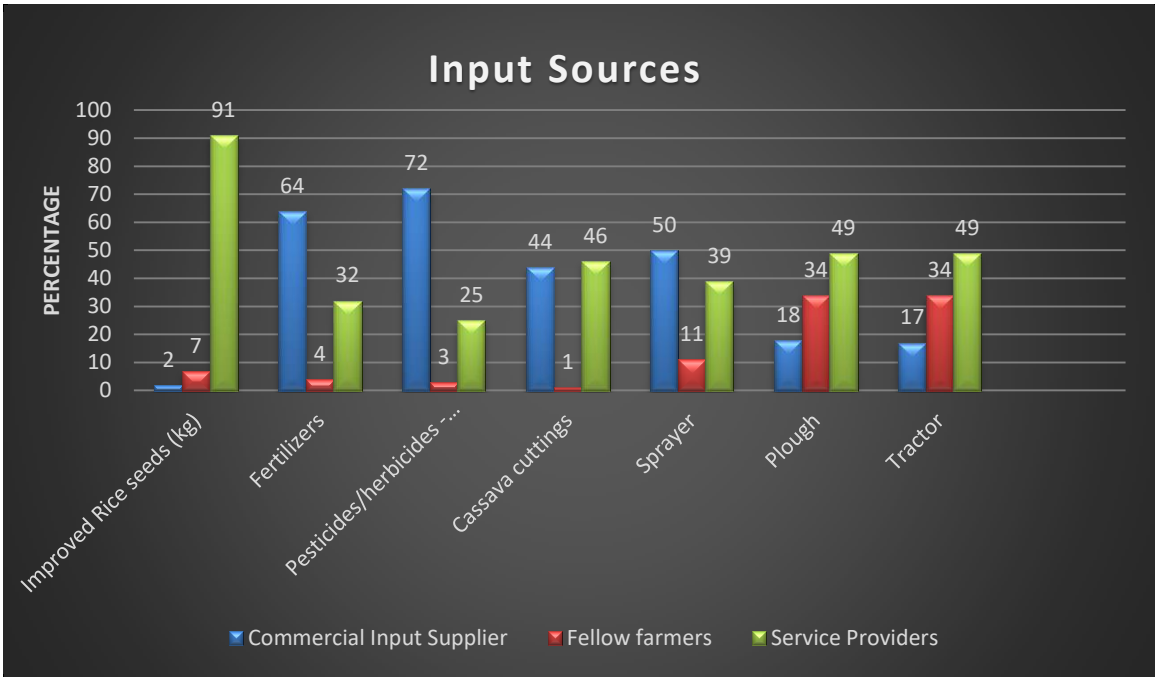
4.2.3 Input Sources

These inputs are for crop producers alone and the figure below explains how the beneficiaries accessed the inputs that increased their sales and eventual income earned.

From the figure table below, it should be noted that Commercial input suppliers are private sellers of these products and they have a partnership with the IFAD-VCDP to subsidize the sales of these products to the farmers. The beneficiaries were not given the inputs for free, there is an agreed amount they pay per input and IFAD-VCDP makes up to the commercial input suppliers. Fellow farmers just as the name implies means farmers buy these inputs from each other or share. The Service providers are the IFAD-VCDP initiators. So, it is safe to say that the Commercial input suppliers and Service providers are closely related since they have a partnership agreement.

Improved rice seeds and cassava cuttings were accessed by majority of the beneficiaries from the service providers knowing their expertise in seeds and stem modifications is unparalled as it would have gone through series of experiments to increase its yield and withstand pest encroachments and environmental hazards. Agrochemicals, fertilizer and Sprayer were accessed directly from the suppliers. Heavy machines such as plough and tractor were accessed from the service providers more as they have to go through some process to ensure documentation and effective monitoring. The intervention was well planned, with the inclusion and consultation of private sellers (stakeholders), it showed how much interest they had in ensuring impartation on these smallholder farmers who before now had little or no access to these inputs even though it was available.

Figure 6 – chart showing the percentage of each input by the providers



4.2.4 Mean Harvest of Production Outputs

It is observed that due to the intervention, the range of cassava harvest with VCDP is 5tons and 25,000tons with a mean average of 36.5tons while before VCDP, it was 15.58tons with range of 1ton and 25tons. This same increase is recorded for rice farmers as the range of harvest before VCDP is 0.25tons and 3.5tons with a mean of 1.099tons while with VCDP, the mean is 3.616tons from a range of 0.8tons and 7tons. The increased use and accessibility of production inputs resulted in the increased tonnage harvested by the crop producers and it confirms the impact of the intervention. This increase definitely had a ripple effect on the quantity of crop processed for final consumption, generating more income across board the enterprise unit. As a result of the value addition right from planting, the consumers get to consume better food, fortified with increased nutrients.

Table 8 – Display of mean hectares and harvest of the production output

Variables	Hectare before VCDP	Harvest before VCDP	Hectare with VCDP	Harevst with VCDP
	ha	ton	ha	ton
Cassava	0.9606	15.58	1.6755	36.5
Rice	0.7442	1.099	1.5581	3.616

4.3 Result of Objective 2 - Evaluation of the level of farmer's income and possession of physical assets

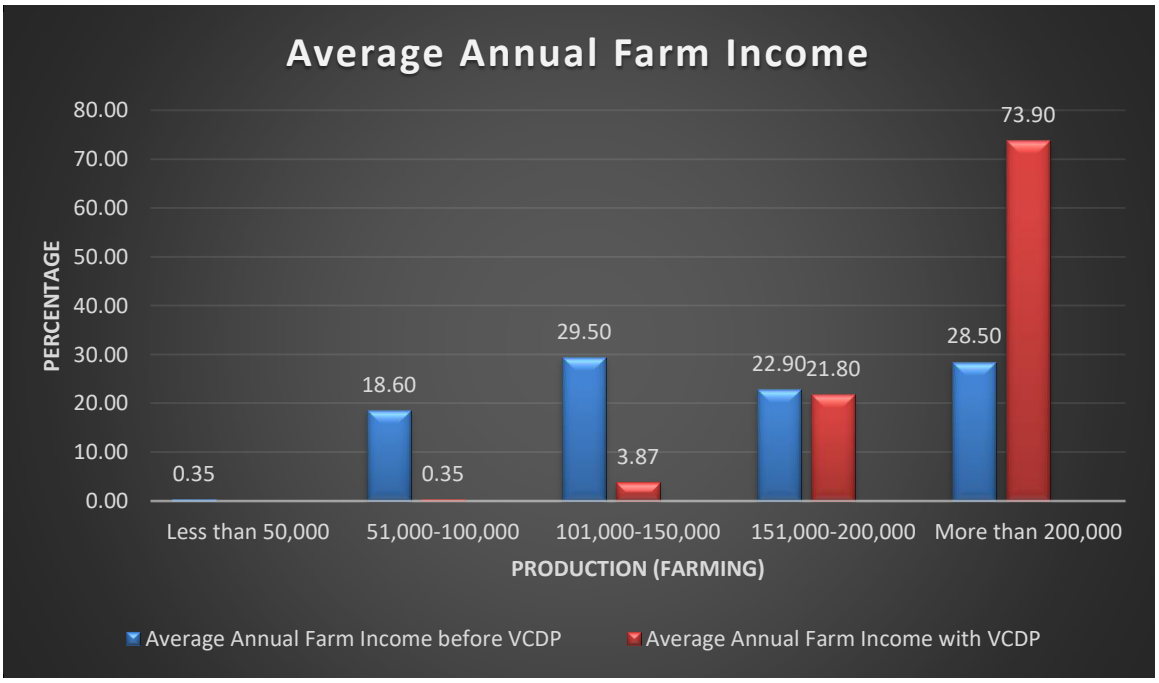
4.3.1 Income of Beneficiaries – Crop Producers

The figure below shows the grouped average earnings by crop producers due to the inputs accessed. The intervention by the Value Chain Development Programme took effect in 2016 and from the data gathered which reflected the impact of the intervention in 2017, one can appreciate the huge difference in their average annual income where out of 284 crop producers, 73.90% beneficiaries earned more than #200,000 with VCDP intervention as against 29.50% producers who earned between #101,000 and #150,000 before the intervention. The percentage of the beneficiaries spread across all the grouped income before the intervention with 18.60%, 29.50%, 22.90% and 28.50% but after the intervention, the numbers were less spread, as over 70% of them earned over #200,000. This remarkable increase stems from the inputs accessed by the beneficiaries such as; improved cassava cuttings/rice seeds, fertilizer, other agrochemicals as well as access to land. The beneficiaries also had access to mechanized farming as opposed to manual labour they engaged in. With this, they could focus their energy on maximizing the potential impact of the machines and other improved techniques introduced to them.

The economic value of cassava crop is quiet high looking at the various foods it is processed into. It can be processed to about 12 different foods, which explains why we have majority of the farmers in the state planting cassava and making ends meet through its yield and typifies value addition on a large scale.

These beneficiaries, asides the financial upliftment recorded, their exposure to the use of those inputs definitely increased their human capacity and knowledge as some of them didn't apply these favourable techniques initially because of their traditional believes and maybe because of financial constraint. The state is predominantly agrarian population, and so the programme extensively leveraged on this in achieving their aim and also contribute their quota to improving the livelihood of these smallholder farmers.

Figure 7 - Chart showing average annual farm income of crop producers.

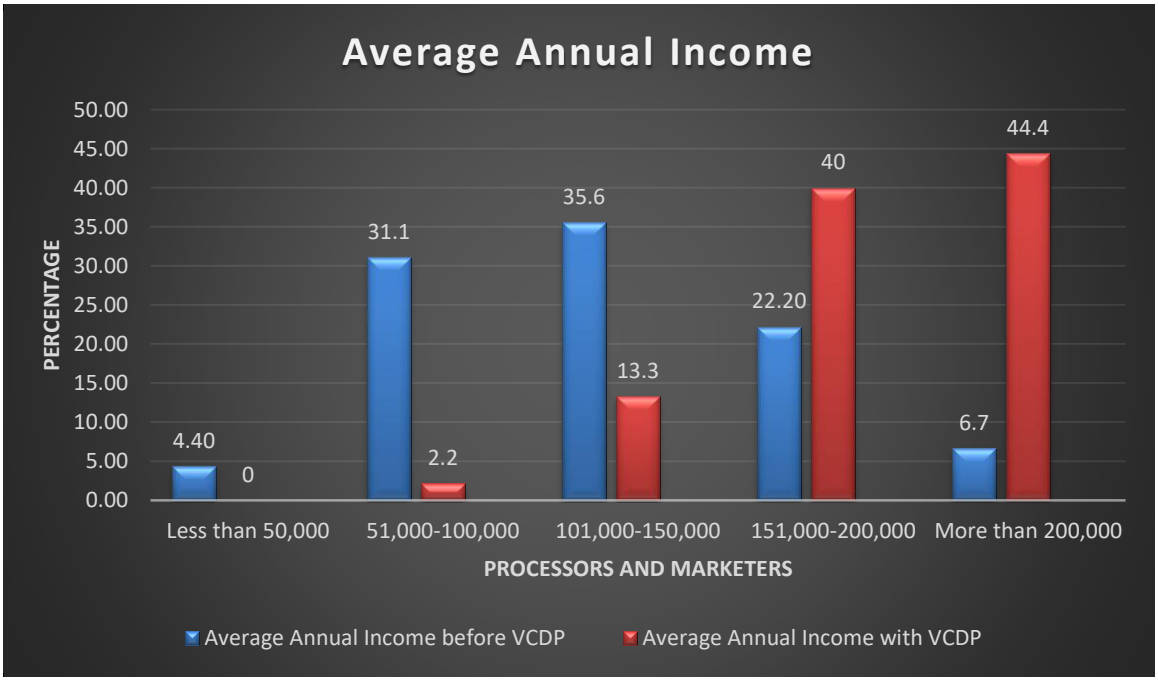


4.3.2 Income of Beneficiaries – Processors and Marketers

The population is predominantly agrarian and so more than 90% of them are crop producers. However, due to focus of the intervention on value chain addition, these benficiaries were catered for in their different enterprise units, even though there was still more focus on the producers' enterprise unit due to the population and importance.

From the figure below, one could observe the impact of the intervention on the average annual income as the percentage of beneficiaries with higher income increased to 44.4% at more than #200,000 as against 36.6% beneficiaries at #101,000 - #150,000 before the intervention in the processing and marketing enterprise unit. With access to improved processing techniques such as 'False bottom technique' for rice processors, rice and cassava processing mill with modern equipment, we could see a positive change. Access to market and availability of reliable offtakers also increased the sales of marketers and consequently their income. Access to market information through Agricultural Market Information System (AMIS) is also a considerable factor in the increase in income, as the benficiaries are aware of prevailing market issues or opportunities at the right time. With continued intervention, maintenance, practice and improvement in garnered knowledge; the standard of living of these smallholder farmers would continue to increase.

Figure 8 – Chart showing average annual income of processors and marketers



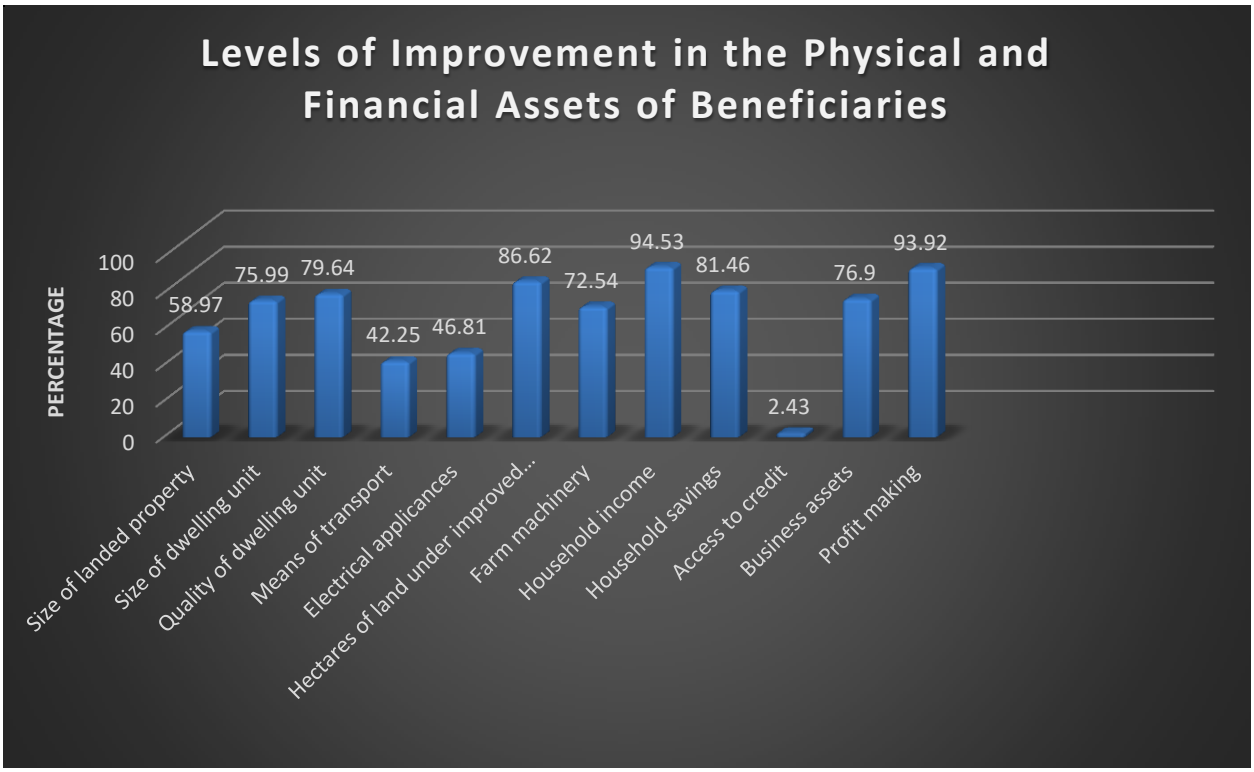
4.3.3 Impact of the programme on the Physical and Financial Assets of Beneficiaries.

The illustrations below explain how much the value chain development programme has impacted on the beneficiaries looking at the variables outlining their assets and physical improvements. With a total sample size of 329 across the crop enterprise (Cassava and Rice) and enterprise unit (Producers, Processors and Marketers), it is seen here that the beneficiaries had over 70% improvement in their physical and financial assets as a result of the intervention, except for; Means of transport, Electrical appliances and Access to credit which had 42.25%, 46.81% and 2.43% respectively in the variables outlining the impact on the beneficiaries. Acquiring assets isn't as easy as inputs been accessed to improve farming activities, therefore making assets acquisition quite a luxury for some, as needs are considered on a scale of preference. Also, access to credit isn't an asset to be acquired and the programme did not directly give loans, but

linked the farmers with microfinance institutions to apply for loans and have agreement with the financial lenders but the issue of collateral was a constrain as many of them couldn't meet the requirement of the institutions, thereby depriving them access to credit and giving such a low number of beneficiaries.

It is also worthy of note that beneficiaries of Hectares under land improved management and Farm machinery were only producers in the crop enterprise as the variables are not applicable to processors and marketers. Out of a total 284 sample size for the producers, one could also observe that over 70% of them benefitted from these mechanized farming techniques, even though they were not directly funded to access these inputs. These results, show overall that there were immense benefits for these farmers in their respective value chain

Figure 9 – Chart showing the level of improvement in the physical and financial assets of beneficiaries



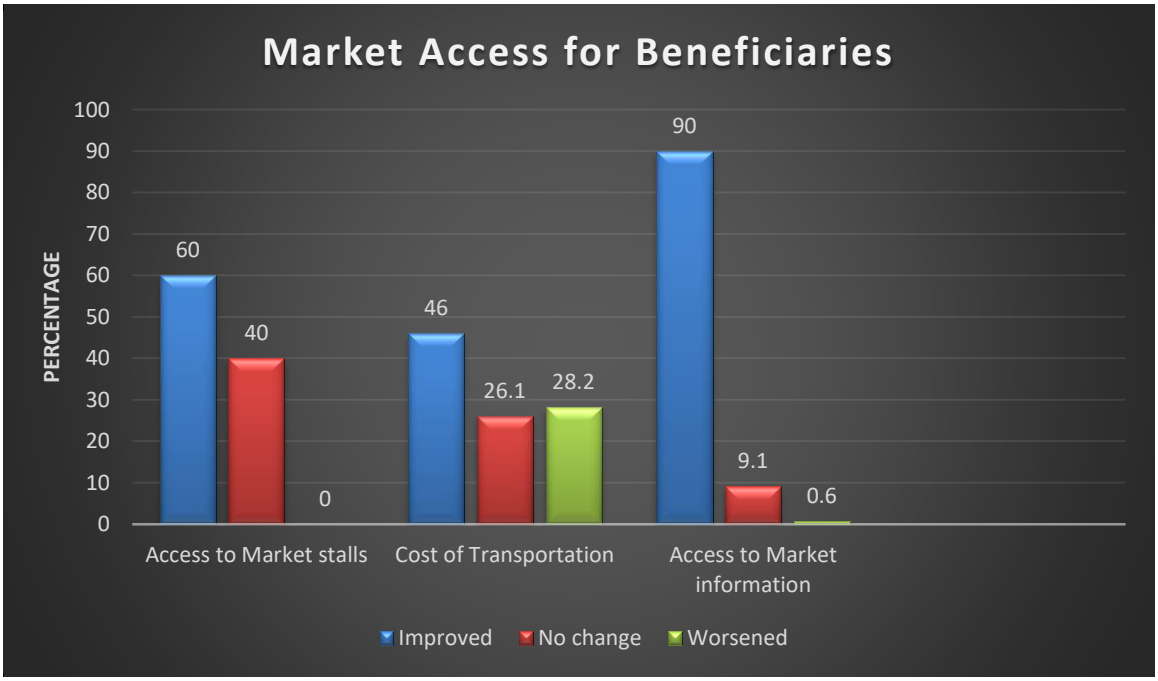
4.4 Result of Objective 3 - To identify beneficiaries' access to market and improved services.

4.4.1 Beneficiaries' Access to Market

The figure below reveals that the beneficiaries had a significant increase in their access to market. Access to market stalls applies only to marketers and we could see that they had access to market stalls as new markets were constructed for them close to their community where they could still meet demand and they don't necessarily have to travel few kilometers to the main community market. This has eased their livelihood. Having improved market access means it would have a ripple effect on cost of transportation as it makes it easier to reach the target market without much cost to bear and also helps to save.

The beneficiaries have increased access to market information, being part of a farmer organization where information flows and ideas are being shared during meetings. The heads of the farmer organizations have more access to information, being the contact person in the communities with the IFAD-VCDP extension agents in the local governments and therefore reaching out to their members frequently. In addition, the Agricultural Market Information System (AMIS) initiated by the programme also increased their access to information about current issues in the market such as price, weather reports on planting period, availability of off-takers, e.t.c. Through the AMIS, beneficiaries get instant messages applicable to their value chain activities and this has increased their awareness on prevailing information in the market.

Figure 10 – Chart showing the market access for beneficiaries



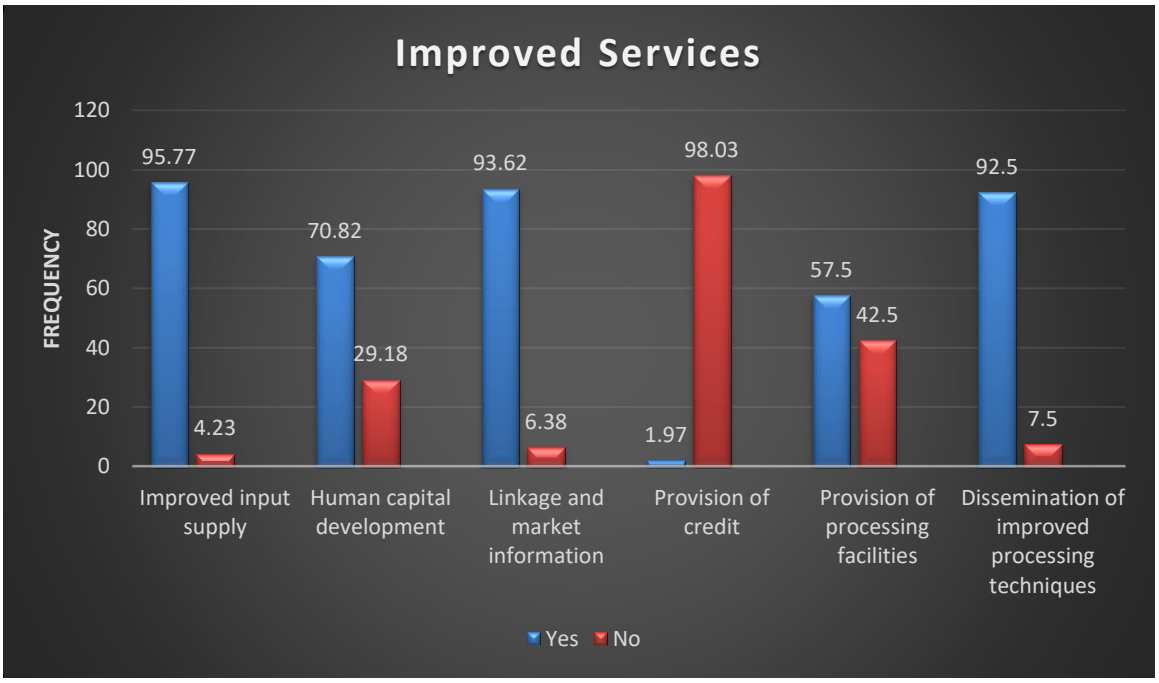
4.4.2 Beneficiaries' Access to Improved Services

It is observed in the figure below that the beneficiaries in the enterprise units got access to services that invariably increased their earnings and also added value to them in terms of human capacity. The intervention recorded a huge success, not only in providing goods but also services provided to increase human capital development where they were not only given the high yield crop species but also trained on stem modification and application of chemicals. A well-equipped Cassava and Rice processing mill also availed them the opportunity of capacity building as they

operate these machines themselves. "False Bottom Technique" is a rice processing technique majority of rice processors were trained on which they accrued their improved rice quality and increased orders from off-taker to.

Furthermore, provision of credit has a significantly negative response and as earlier stated, it is as a result of the beneficiaries not been able to meet the requirements of financial institutions. As it implies, the provision of processing facilities and improved processing techniques applies only to processors and it's obvious that from a sample size of 40 deduced from the total processors population of 269 in all study areas, more than half of the beneficiaries are inclusive of these services which further emphasizes the impact of the intervention on all enterprise units.

Figure 11 – Chart showing the responses of beneficiaries to services accessed through the VCDP intervention



4.5 Result of Objective 4 – Empowerment Index of Beneficiaries

Empowerment simply refers to techniques used to increase the level of autonomy of an individual or group of people in a community to enable them represent their interests, acting on their own authority. Below are the 5 categories used to measure the empowerment index of the smallholder farmers' beneficiaries in a tabular form.

4.5.1 Categories of Empowerment Index

Table 9 – Display of responses of beneficiaries to questins in the different categories of empowerment index

Categories of Empowerment Index and Questions	**Male**		**Female**		**Total**
Production: Are you allowed to grow any type of crop?	Yes	197	Yes	120	**329**
	No	6	No	6	
Are you allowed to make decision on production methods?	Yes	197	Yes	120	
	No	6	No	6	
Resources: Do you own any asset?	Yes	147	Yes	76	**329**
	No	56	No	50	
Do you have access to credit?	Yes	33	Yes	7	**329**
	No	170	No	119	
Do you take decision for credit?	Yes	38	Yes	9	**329**
	No	165	No	117	
Income: Do you take decision for use of income?	Yes	201	Yes	123	**329**
	No	2	No	3	
Time (Workload and Leisure): Do you go to farm everyday?	Yes	1	Yes	2	**329**
	No	202	No	124	

The table above displays the responses of both gender to the questions raised in 4 out of 5 categories of empowerment index.

Firstly, one could notice that more males responded YES, and it should be noted also that the number

of females that responded YES are more than half of the males that gave same response in each question. In other words, even though the male gender had upper hand, the female gender are not totally left behind in the level of empowerment. All the variables in the table (Production, Income, time) with the exception of Resources (questions relating to credit) had positive responses. This also confirms the earlier results concerning credit accessibility for smallholder farmers, as it just emphasizes that its a problem that should be critically addressed.

Group membership: This is the 5th category of the empowerment index.

Table 10 – Display of group membership of beneficiaries

Group Categories	**Male**		**Female**		**Total**
Agricultural and Livestock group	Yes	120	Yes	56	**329**
	No	83	No	70	
Credit and Microfinance group	Yes	0	Yes	1	**329**
	No	203	No	125	
Mutual help or Insurance group	Yes	0	Yes	1	**329**
	No	203	No	125	
Trade and Business Association	Yes	1	Yes	9	**329**
	No	202	No	117	
Religious group	Yes	146	Yes	114	**329**
	No	57	No	12	
Producers group	Yes	202	Yes	82	**329**
	No	5	No	40	
Processors group	Yes	1	Yes	39	**329**
	No	202	No	87	
Marketers group	Yes	0	Yes	5	**329**
	No	203	No	121	

From the above table, it shows the participation and inclusion of these beneficiaries in groups which shows the level of their empowerment and their ability to form groups where they all

communicate and share ideas for members to benefit in the cooperatives. Low responses in microfinance and insurance groups shows that these farmers needs small loans to help cater for some of their needs.

4.5.2 Public Speaking

Table 11 – Display of responses of beneficiaries to questions on public speaking to determine their level of empowerment

Variables/ Questions	**No, not comfortable**	**Yes, but with great deal of difficulty**	**Yes, but with little difficulty**	**Yes, fairly comfortable**	**Yes, very comfortable**	**Total**
Do you feel comfortable speaking up in public to help decide on infrastructure (like small wells, roads, water supplies, processing facilities) to be built in your community?	Male 2 Female 9	Male 32 Female 10	Male 6 Female 13	Male 29 Female 41	Male 134 Female 53	**329**
Do you feel comfortable speaking up in public to	Male 6 Female 10	Male 26 Female 8	Male 7 Female 14	Male 19 Female 36	Male 145 Female 58	**329**

ensure proper payment of wages for public works or other similar programs?						
Do you feel comfortable speaking up in public to protest the misbehavior of authorities or elected offices?	Male 5 Female 10	Male 24 Female 10	Male 10 Female 15	Male 16 Female 29	Male 148 Female 62	**329**

From the above table, there are still gaps to be filled to ensure women empowerment in our societies. The women beneficiaries responded to the three question, but comparing the number of men and women that responded to options '**Yes, but with little difficulty**' and '**Yes, fairly comfortable**' as against the response of men and women to option '**Yes, very comfortable'** in the three questions asked, we could clearly see that women are still less comfortable to speak in public. But with **little difficulty** and in a **fairly comfortable** environment, they could speak in public.

The researcher posits that in the last couple of years, women has gained some level of confidence and recognition in the world but more needs to be done to achieve *Goal 5 of the SDGs – Gender Equality.* Through provision of education for the girl child and gender equality advocacy, this yearnings can be heard and served.

CHAPTER FIVE

5.1 CONCLUSION

Firstly, I must say that the research was truly a field experience, starting from the interaction with the IFAD-VCDP team in the study location. It was school away from school, as I had the opportunity to practice the theoretical garnered knowledge in school and rub minds with the experienced field practitioners while also gaining and learning from their wealth of knowledge. The data was collected with more or less no difficulty as there was no language barrier.

Secondly, the previous sections have given an overview of the impact of the contrived IFAD-VCDP intervention on the smallholder farmers with special focus on cassava and rice farmers value chains. No doubt, the programme has empowered these farmers and made unprecedented impact on Nigeria's agricultural productivity. Coincidentally, a report was released by the Punch Newspaper on June 27; 2018, that the International Fertilizer Development Centre (IFDC) in collaboration with the Food and Agricultural Organisation (FAO) and other international donors, revealed that fertilizer uptake by Nigerian farmers increased by 63% in 2017, rising from 959,364 metric tonnes in 2016 to 1,564,816 metric tonnes. To accrue the reason for this increase to IFAD alone would seem selfish and insensitive as there are other agencies helping farmers, but the over 12,000 farmers IFAD has helped over the years are indeed inclusive of the Nigerian farmers. This news is an indicator that Nigeria is on the path of Agricultural transformation – which was one of the aims the FGN set out with IFAD at the formation of the partnership.

Furthermore, the productivity and income level of the farmers has increased and indicators are seen in the increased adoption of mechanised farming recorded in the average usage of production input which was more than 50% increase in all inputs accessed. The increased input usage also manifested in the tonnes harvested with over 50% increase. The increase in

production by crop producers, increase in crop quantity processed and increase in sales by marketers, earned these farmer beneficiaries more income and the impact was revealed in their ability to own more assets and improvement in standard of living such as household income, savings, business assets and quality of standard of living.

Thirdly, market access serves as the output of every input a farmer uses in the course of planting, in essence, a lot of opportunities need to be created to fit the dynamism of the market. These opportunities should be created having youth participation in mind, as there are not many of them in the enterprise units. If more opportunities created are youth oriented, there is high likelihood of incursion of youths in agriculture which is an added resource in achieving sustainable agriculture.

Lastly, the presence of farmer organisations in the rural areas has immensely benefitted their members and extensively served as middle-men between the implementers and the beneficiaries in specific capacities.

5.2 RECOMMENDATION

Access.

Access to finance, credit and storage facilities is essential for farmers. Access to small loans gives farmers opportunities to rely on another finance source apart from their income, and hence, reduce dependence on income. It would increase their saving capacity, help acquire more assets and enable them meet more needs. Accessing loans by smallholder farmers means that all extreme financial conditions should be removed or made favourable so the institutions can service the low-income earners according to their capability. Provision of storage facilities should be enhanced. It makes the farmers acquire more land, knowing with their harvest to inputs and farming practices learnt that would guide them through to harvesting, they are sure of little or no post-harvest wastage of their crops before it is purchased.

A feature that is well practiced in the food secure nations is a government intervention where farmers are sponsored to produce surplus and after harvest, the government collects and stores for times of food shortages when it would normally be expensive, the government in turn release those food to ensure surplus in the market when there is scarcity, food would then be sold at the

cheap rate it used to be sold. These mechanism by the government enriches the farmers at the time of the sponsorship because they produce on a large scale and sell to the government which ensures that food, a basic need is always made available and accessible for all. In Nigeria, we experience shortages and costly food prices. With the adoption of this initiative, there will be constant availability of food.

Public-Private sector investment.

The government should form more partnerships with private sectors to build rural infrastructures, engage in agricultural research and extension services to engender improved knowledge of sustainable agricultural practices that would impact on the farmers. With better infrastructures in rural areas and consistent extension services, it would increase youth participation in agriculture and shift the age range of active farmers from the middle age to teen/adolescent age, thereby engendering new ideas and innovations from the younger generation. Youth participation increases knowledge of agricultural value chain which provides business opportunities for actors in the enterprise units.

Record keeping and access to market information.

One important step in becoming an efficient grower or a "crop specialist" is keeping good records. By keeping track of labour, inputs on the farm, stages of production, smallholder farmers can better understand the costs involved in producing their crops. Through the knowledge of costs of production, a farmer can make better-informed decisions, such as calculating selling prices more precisely.

Sustainability.

There should be sustainability plan in place to ensure continuity of the programme after the completion of VCDP intervention. With consistent training, a model of Training of Trainers (ToT) would be in place so they can facilitate training of new farmers and continue to impact knowledge.

References

International Fund for Agricultural Development (IFAD), 2013 Improving Young Rural Women's and Men's Livelihoods - The most sustainable means of moving to a brighter future. Paper Review published in Centre for Alleviation of Poverty through Sustainable Agriculture (CAPSA) Newsletter. Vol 31. No 1. Apr 2014, pp 9.

https://www.thechicagocouncil.org/blog/global-food-thought/role-smallholder-farmers-ridding-world-poverty

Department of Agriculture, Forestry and Fisheries (2012), Framework for the development of smallholder farmers through cooperation development, South Africa

WBCSD (2011) Collaboration, innovation, transformation: Ideas and inspiration to accelerate sustainable growth - A value chain approach, p.3 & 5

Food and Agriculture Organization of the United Nations (FAO), 2014 Transforming Rural Livelihoods – How South-South Cooperation with China is improving lives in Nigeria

R.N Mgbenka and E.N Mbah. 2016 A Review of Smallholder Farming in Nigeria: Need for Transformation. Published by European Centre for Research Training and Development UK (www.eajournals.org)

Akinsuyi, Y. 2011. Local Government Intervention: Impact in Small-Scale Farming. This Day Live, www.thisdaylive.com, accessed on 4th July 2012

http://www.vcdpnigeria.org/?page_id=9

Boserup, E. 1981, Population and Technology, Oxford, Basil Blackwell

Feighery, Ingram, Stephanie Li, and Sean Redding. 2011. Intersections of Youth & Food Security. Trachtenberg School of Public Policy and Public Administration, The George Washington University. Retrieved on February 10, 2017

https://www.thriveagric.com/blog/agricultural-value-chain/

Akram-Lodhi, A.H. 1997, 'The Unitary Model of the Peasant Household: An Obituary', Economic Issues, vol. 2, Part 1, pp.27-42

Bauer, P.T. 1981, Equality, the Third World and Economic Delusion, London, Weidenfeld and Nicolson

Myint, H. 1958, 'The 'Classical Theory' of International Trade and Underdeveloped Countries', Economic Journal vol. 68, reprinted in Livingstone (ed.) 1981, pp. 99-107

Appendix 1

Gantt chart showing work plan for the three month field practicum

S/No	Activities	March				April				May			
		Week											
		1	2	3	4	5	6	7	8	9	10	11	12
1.	Preparation and travel plan to field trip												
2.	Familiarity with the project team members												
3.	Work with the project design plan and visit												

	to some field site												
4.	Data Collection												
5.	Monthly Report												
6.	Computation and analysis of data and compilation of reports												
8.	Submission of report												
9.	Predation and travel plan from project site												

Ogun State VCDP Implementation

- A total of 6,533 farmers (Cassava – 5,122. Rice – 1,411) from 424 FOs (Cassava -329, Rice -95) were profiled.
- A total of 5,147 farmers were supported with Agro-Inputs (NPK- 771.15mt, Urea – 103.4mt, Herbicides 15,423 litres, Rice seed – 54.2mt, Cassava Cuttings – 112,254 bundles) for 3,904 hectares.
- A total of 440 hectares of land developed across the 5 LGAs.
- A total number of 730 Youths were trained on Modern Spraying Techniques.
- 52 MoU signed between 45 Clusters (42 Cassava, 3 Rice) and Off-takers covering 259 Farmer Organizations (4,680 Farmers) facilitating the supply of a total of 73,091mt of Cassava and 1,193.8mt of Rice (843.8mt Ofada and 350.0mt Faro) to off-takers.
- Construction of the 20km farm earth roads across the initial 3 participating LGAs. *
- Distribution of processing and production equipment to 6 Youth and Women FOs and Distribution of 15 Power Tillers to 15 production groups.
- Construction of 5 solar-powered Boreholes
- Construction of 3 processing centers
- Linkages were established with relevant agencies since inception, notable among which is NAFDAC, SON, Bank of Industry, CAVA, Nigeria Export Promotion Council, NAIC, NIRSAL AND CBN.
- The Programme facilitated the acquisition of android phones for 50 lead farmers and activation of 1000 farmers on the AMIS platform through Novus Agro.
- 30 Youth farmers trained on Rice and Cassava seed production
- 300 FOs benefitting from capacity strengthening activities.

- A total of 51 Demo Plots (Cassava 46, Rice 5) established by both PESP and VCDP Extension Officers. The highest yield of TME 4(19) Cassava variety is 48.2t/ha.
- Ogun VCDP achieved an increase in yield of Cassava from baseline figure 10.1mt to 25.0mt and Rice from baseline figure of 1.96mt to 3.3mt
- Construction of 3km feeder road at Shangisha, Yewa North local government
- Construction of 5km IMO-IJIWO-SOWUNMI EARTH/FARM ROAD IN Obafemi-owode local government

Challenges

- Low level of literacy of the beneficiaries
- Some of the beneficiaries face the challenge of meeting their matching grant obligations.

Appendix 2

The Researcher conducting pre-test with some selected farmers in Obafemi-owode LGA.

The Researcher training the Enumerators on the use of Open Data Kit (ODK) online adminstration of questionnaire. Also present was the Project, Monitoring, Evaluation and On-site supervisor, Mr. David Onigbinde and the Technical Assitant (Monitoring & Evaluation), IFAD-VCDP, Mr. Oluranti Diyan at the IFAD-VCDP office in Abeokuta, Ogun state.

The Reseacher with the Chairman of Oludarapo FO- Cassava Producers, Mr. Johnson in Obafemi-owode LGA.

The Researcher with Agbedotun Rice Producers and Agbewunmi Rice Processors in Sowunmi Community cluster Obafemi-owode LGA.

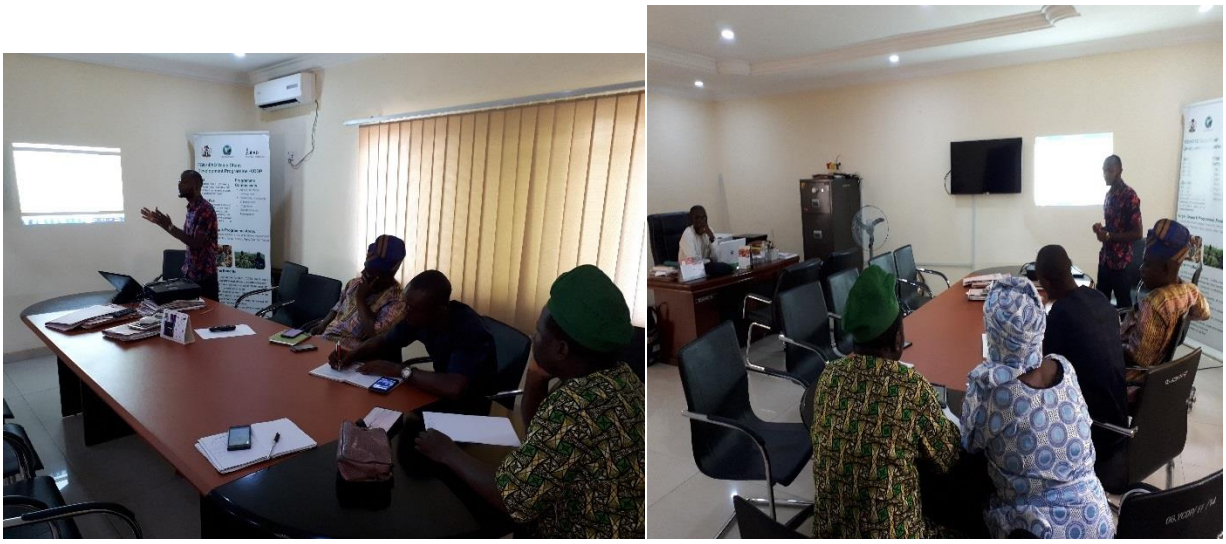
The Researcher with the Ojolemi Agbe/De Royal Rice producers and Ojolemi Agbe Rice Processing and Marketing Leaders and An Enumerator, Mr. Adebiyi Paul administering the online questionnaire, at Eggua Community cluster Yewa North LGA.

The Researcher at the just completed Rice processing mill and tractorisation of the 172Ha Eggua Ofada Rice Cluster in Eggua Community, Yewa North LGA.

The Researcher with Orisunmbare Women Processing group with an Enumerator, Mr. Sanya administering the online questionnaire and interviewing the chairman of Agbelere Cassava producers in Alapako community cluster in Obafemi-owode.

The Researcher at Baara community with the On-site supervisor, Mr. David Onigbinde and garri processors.

From T-B. Peeling and Washing machine, Grating machine, Dewatering machine, Sifting and Granules machine, Manual and Mechanical fryers. Cassava processing mill in Baara community.



The Researcher during preliminary presentation to the members of the Ogun State Project Monitoring Unit. From L-R. Mr. Babatola Williams, Agroprocessing & Quality Enhancement Officer; Mr. Kunle Oyesanwen, Business & Market Development Officer; Alhaji. Yinka Amosun, Agriculture Production Officer; Mr. Samuel Adeogun, State Project Coordinator; Mr. Temitayo Bamidele, Researcher; Mrs. Abiola Sobukola, Rural Institutional Gender & Youth Mainstreaming Officer; Mr. David Onigbinde, Project Monitoring Evaluation Officer; Mr. Ibukun Faneye, Knowledge Management & Communications Officer.

QUESTIONNAIRE

APPRAISAL OF IFAD VALUE CHAIN DEVELOPMENT PROGRAMME ON SMALLHOLDER FARMERS WELFARE IN OGUN STATE, NIGERIA

Introduction

This survey is aimed at appraising the impact of IFAD value chain development programme on smallholder farmer in two implementing Local Government Councils of **Obafemi-owode and Yewa North in Ogun State**. This questionnaire is, therefore, designed to elicit information from beneficiaries (farmers) of the project on possible changes contributed by the project. Whatever information obtains from you will be treated with strict confidentiality. Thank you for your cooperation.

Household Questionnaire

Section A: General Information

A. Socio-Economic and Demographic Characteristics of Respondents

Serial No.	Variables	Responses	Code
A1	Questionnaire ID	[ ]	
A2	Interviewer	Name	
	Farmer's Name		
A3	Farmer's organization	Name	
A4	State	Name	
A5	Local Government Area	Name	
A6	Community	Name	
A7	Age of respondent (years)		[ ]
A8	Gender	Male Female	[1] [2]
A9	Marital status	Single/never married Married Separated Divorced Widowed	[1] [2] [3] [4] [5]
A10	Household size	Number of people	[ ]
A11	Average annual income	Amount N…….	
A11	Highest education attainment	No formal education Primary education not completed (years) Primary education completed Secondary school not completed (years) Secondary school completed Post-secondary education (years) Practical Farm Training	[1] [2] [3] [4] [5] [6] [7]
A12	Farm size	_____	
A13	Type of enterprise unit	Production (farming) Processing Marketing	[1] [2] [3]
A14	Type of crop enterprise	Rice Cassava	[1] [2]

GPS Coordinates: Latitude _____ Longitude_____

1. Which method do you use for land preparation?

   Manual [ ]

   Mechanical [ ]

2. Source of water for total VCDP supported hectarage under production?

   Rain fed [ ]

   Irrigated [ ]

Section B1. Production Input – Kindly indicate if you got access to the following inputs?

Inputs accessed	**Quantity used before VCDP**	**Price bought before VCDP**	**Quantity during VCDP**	**Price bought during VCDP**
B3.1 Improved seeds/cuttings (kg)				
B3.2 Fertilizer (kg)				
B3.3Agrochemicals (ltrs)				
B3.4Land clearing (ha)				
B3.5 Land preparation (ha)				
Others				

B2. From whom were these inputs and technologies sourced?

Inputs Sources	**Pick option(s) from the following options. (1 = Off-taker/buyer, 2 = Commercial inputs supplier, 3 = Fellow farmers, 4 = Service providers, 5 = Others – specify). (multiple responses allowed)**
B4.1 Improved seeds (kg)	
B4.2 Fertilizers	
B4.3 Pesticides/herbicides	
B4.4 Cassava cuttings	
B4.5 Rice seeds	
B4.6 Sprayer	

B4.7 Power Tiller	
B4.8 Plough	
B4.9 Tractor	
B4.10 Tarpaulins	

B3. Production Outputs - What is the total land cultivated and quantity of each commodity harvested?

Inputs	**Hectare before VCDP (ha)**	**Quantity before VCDP (ton)**	**Hectare during VCDP (ha)**	**Quantity during VCDP (ton)**
Cassava				
Rice				

Section C1: Farmers' Income

Kindly indicate improvement in your income due to your participation in IFAD value chain development project.

What was your average annual farm income before participating in the programme?	**What is your average annual farm income after you started participating in the Programme**
Income range (Please tick in the box below)	**Income range (Please tick in the box below)**
Less than 50,000 ☐	**Less than 50,000** ☐
51,000 – 100,000 ☐	**51,000 – 100,000** ☐
101,000 – 150,000 ☐	**101,000 – 150,000** ☐
151,000 – 200,000 ☐	**151,000 – 200,000** ☐
More than 200,000 ☐	**More than 200,000** ☐

Section C2: Physical and Financial Assets

Kindly indicate improvement in ownership/access to physical and financial assets as listed in the table below in the previous year that is due to your participation in IFAD value chain development project

Variable	Worsened	No change	Improved	Not applicable
C1 Size/number of landed property owned				
C2 Size of dwelling unit				
C3 Quality of dwelling unit				
C4Means of transport				
C5 Electrical appliances				
C6 Hectares Of Land Under Irrigation				
C7 Hectares Of Land Under Improved Management				
C8 Livestock Kept				
C9 Crops Cultivated				
C10 Fish Stock				
C11 Water Points				
C12 Rainwater harvesting system				
C13 Farm machinery				
C14 Household income				
C15 Household savings				
C16 Access to credit				
C17 Business assets				
C18 Profit making				

C3. Market Access

Kindly indicate changes in the following as a result of your participation in IFAD value chain programmes in the previous year

Variable	Worsened	No change	Improved	Not applicable
C3.1 Access To Market Stalls				
C3.2 Cost Of Transportation				
C3.3 Access To Market Information				

C4. Improved services

Please indicate whether you have equal opportunities with respect to access to the following services provided by IFAD Value Chain Development Programme

Variable	Yes	No
C4.1Improved Input Supply		
C4.2 Human Capital Development (Training And Farming Experience)		
C4.3 Linkage And Market Information		
C4.4Provision Of Fertilizer		
C4.5 Provision Of Credit		
C4.6 Provision Of Processing Facilities		
C4.7Dissemination Of Improved Processing Techniques		
C4.8 Member of any collective action initiatives – farmer groups		

SECTION D: Determinants Of Empowerment Index On The Beneficiaries.
Appraisal of Impact on Smallholder Farmers Welfare

D1. **Production:**

1. Are you allowed to grow any type of crop for consumption and sale to the market? Yes ( ) No ( )
2. If yes in 1 above how many types of crops? (Please specify) _____
3. If No in 1 above, why? _____
4. Are you allowed to make decisions on methods of production or techniques? Yes ( ) No ( )

D2. Resources:

5. Do you own any asset? Yes ( ) No ( )
6. If yes in Question 4 above, what type of asset do you own? Please specify _____
7. Do you have access to credit? Yes ( ) No ( )
8. Do you take decisions for credit? Yes ( ) No ( )

D3. Income:

9. Did you participate in the last 12 months on decision on use of income from production? Yes ( ) No ( )
10. If yes how much input did you have? Very well ( ) fairly well ( ) Not at all ( )
11. When decisions are made regarding use of income generated for the Household, who normally takes decision? Main male or husband ( ) Main female or wife ( ) Husband and wife jointly ( ) Someone else in the household ( ) Jointly with someone in the household ( ) Someone outside the household ( ) Household does not engage in activity ( )
12. To what extent do you feel you can own your decision regarding control over use of income? High extent ( ) medium extent ( ) small extent ( ) Not at all ( )

D4. Time (Workload and Leisure):

13. Please specify the time you wake up

	Wake-up time
Weekdays	
Weekends	

14. Do you go to the farm everyday? Yes ( ) No ( )
15. On the days you don't go to the farm, when do you wake up?
16. **Activities you engage in on the days you don't go to the farm (multiple responses allowed)**

Activities	**Average time use (in hours)**
Cooking	
Domestic work(including fetching wood and water)	
Care for children/Adults/Elderly	
Social activities, watch TV and hobbies	
Religious activities	

D5. Leadership: Group Membership and Public Speaking

17. Are you a member of any of the groups stated below?

Group categories	**Yes**	**No**	**What is your position in the group? (leader or member)**
Agricultural and Livestock group			
Credit or microfinance group			
Mutual help or insurance group			
Trade and business association			
Religious group			
Producers group			
Processors group			
Marketers group			

18. If you are not a member of any of the groups stated above, please state the reason

_____

19. How much input do you have in decision making in the group?
    Much input ( ) Little input ( ) No input ( )
20. Kindly pick an option from the options in the Response chart.

Variables	Response	Response options/instructions
1. Do you feel comfortable speaking up in public to help decide on infrastructure (like small wells, roads, water supplies) to be built in your community?		No, not omfortable_____1 Yes, but with a great deal of difficulty_____2 Yes, but with a little difficulty____3 Yes, fairly comfortable_____4 Yes, very comfortable_____5
2. Do you feel comfortable speaking up in public in public to ensure proper payment of wages for public works or other similar programs?		
3. Do you feel comfortable speaking up in public to protest the misbehavior of authorities or elected offices?		

Annual Average Income for Processors and Marketers.

What was your average annual farm income before participating in the programme?	**What is your average annual farm income after you started participating in the Programme**
Income range (Please tick in the box below) **Less than 50,000** ☐ **51,000 – 100,000** ☐ **101,000 – 150,000** ☐ **151,000 – 200,000** ☐ **More than 200,000** ☐	**Income range (Please tick in the box below)** **Less than 50,000** ☐ **51,000 – 100,000** ☐ **101,000 – 150,000** ☐ **151,000 – 200,000** ☐ **More than 200,000** ☐