

Assessment of Kogi Appeals Project on the Livelihood Status of Cassava Farmers in Kogi State

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Abstract

This paper addresses the challenges militating against Agribusiness ventures and proper solution to revamp the depleting livelihood conditions of rural farmers and SMEs in Nigeria and by extension Kogi State. Assessment of impact of Kogi APPEALS Project on livelihood status of registered cassava farmers under the intervention programmes in Kogi State Nigeria. A multi-stage sampling technique was adopted to select 301 participants in Kogi State, 44.18% of respondents were drawn from Kogi East Senatorial District, 36.54% were drawn from Kogi West Senatorial district while 19.26% were drawn from Kogi Central Senatorial district. A total of 301 respondents who are farmers were interviewed with the aid of questioner. Data was obtained via both primary and secondary sources and subjected to descriptive Analysis. The monetary value of cassava sales in (tons) was evaluated in relation to current market prices and per capita income of the state which is 4593usd as against N1400 to a dollar exchange rate as at today 11/05/2024 for the state. Results shows that 67.44% of the total respondents were males while 32.56% were females within the age range of 18 – 70years. All the respondents maintained uniform farm sizes of two hectare 2h under APPEALS Project intervention and about 11.30% were single, 55.15 % married, 11.63% Divorced, 21.59% widowed and 0.33 % separated. Almost all of the respondents received support in terms of inputs supply (fertilizer, seeds and pesticides), farm mechanizations (ploughing, Harrowing and Ridging), Capacity Building Training and Development/Workshop and Rural Infrastructural Rehabilitation support which were evident from the descriptive model. The result of this study also indicated that farmers yields increased from an average value of 13.2t/ha (33.0% of recommended yield) before APPEALS project intervention increase it to 30.23 t/ha (75.58% of recommended yield). This yield increase showed that continuous Agricultural support program will address food security and alleviate rural poverty. This assessment reveals that APPEALS project Kogi State have impacted positively and sustainably on the rural livelihood of Cassava farmers and promote Economic growth in the State and Nigeria at large.

Keywords: Beneficiaries, Cassava Value Chain, Kogi APPEALS Project, Livelihood Status PDO's, World Bank.

Introduction

Several literatures have indicated that Agriculture remains a source of livelihood for about 86% of rural people and generate job opportunities for approximately 1.3 billion small-scale farmers and landless workers according to Mokgomo et al. (2022) yet many of these small-scale farmers remain unproductive having received agricultural supports in Nigeria. Population growth and level of poverty in Nigeria is a major threat that needs to be informed knowing fully well

that they have substantial economic potential in its agricultural sector. Ortiz-Miranda et al., (2022) and Giller., et al., (2021) has recognized Agricultural development support as one of the key strategies of government in developing countries for enhancing the livelihoods of small-scale farmers.

Over the past decades Agricultural Productivity has reduce

drastically and livelihoods of rural farmers are poorly driven by the meager budgetary allocations to the Agricultural sector by the Federal Government of Nigeria which in turns becomes factor influencing food insecurity poor agricultural practices and decreasing agricultural productivity. Among other factors outline by several authors, other limitation facing rural dwellers registered farmers and SME's include reduced access to Credit facilities lack of access to market poor infrastructure low level of education lack of production inputs such as seeds and fertilizer climate change, drought soil erosion water pollution and other atmospheric conditions are in conformity with Altman, et al. (2009); Baiphethiet al (2009); Dioulaet al (2013); Matshe (2009); Mizik (2021); Wale, et al (2021); Ortmann et al (2007); Sikhweniet al (2014) and Von Loeperet al (2016). Lack of skilled manpower poor tools machinery and technology usage has affected the rate of increase in agricultural output and determines how the increase impacts on poverty levels in accordance with Meinzen-Dick et al. (2004). Nkonya et al.(2004) had suggested measures which can be taken to increase adoption of yield-enhancing technologies these include; Lowering fertilizer costs or subsidy Lowering the price of other inputs and raising agricultural product prices, Improving small holder farmers' access to finance agricultural development adopting a "package" approach to provision of agricultural development technologies and development and rehabilitation of infrastructure for agricultural inputs and product markets. The lack of effective and efficient agricultural policies/plan towards improving the standard of living of rural farmers SME's and stakeholders in the cassava production and processing value chains that has led to inadequate progress in the efforts to promote National and International Development Plans or targets of food security having been review by Blingnaut et al(2014) as lack of monitoring and coordination.

Several opinions from data collected from farmers or respondents advocated that improvement of farmers' productivity can be achieved in Nigeria by ensuring inputs are benefited by registered farmers while proper monitoring is conducted to evaluate its greater impact as its key towards improving the agricultural sector in Nigeria. The plans to support Good Agricultural Policy and operate within the limits of its quality framework which will go a long way ameliorating poverty by improving welfare and livelihood of farmers as well as promoting food security (Rosegrant et al., 2002).

According to Okojie (2019) the Nigerian government has reduced its budgetary allocation to the agricultural sector by 20% from N173 billion in 2018 to N138 billion in 2019 despite government efforts to attain food security. The N138 billion which comprises of both recurrent and capital expenditure cannot address issues relating to Mechanization Establishment of Irrigation Facilities and Dams Extension Services. Insurance Fertilizer subsidy Good Road

Infrastructure Research and Development alone without the interventions of World Bank Projects and Agriculture Assisted Programs from major donor agencies and funding partners in agriculture like International Fund for Agricultural Development (IFAD) African Development Fund (ADF) International Development Research Centre (IDRC) Alliance for a Green Revolution in Africa (AGRA) APPEALS Project and Agricultural Trust Fund (ATF). This is because the agricultural sector had been constrained with factors such as poor rural infrastructure poor fertilizer distribution and high cost of farm inputs that could have enhance its production capacity and contribution to the GDP and economic development. These constraints militating against agricultural productivity support policies and programmes set aside to achieving intended objective of reducing chronic hunger unemployment abject poverty and inequality need to be addressed as pointed out in accordance to Hlatshwayo, et al (2021) and Mpandeli, et al (2014).

Earlier studies of other Agricultural Intervention programmes of the FGN which has shown a generally low Agricultural output of small-scale farmers and SME's in Nigeria and Africa at large which has created existing gaps for researcher to address the challenges by promoting sufficient and adequate Agricultural Development Support improve the livelihood of small-scale farmers through measurable factors that improve agricultural productivity through increase yield income generation and food security. The situation has generated concerns by the World Bank and the Federal Government of Nigeria (FGN) to partner with other stakeholders in the Agribusiness industries to design the Agro-Processing Productivity Enhancement and Livelihood Improvement Support (APPEALS) Project to continue from where the commercial Agriculture Development Project (CADP) has stopped.

The APPEALS Project is a Federal Government of Nigeria (FGN)–World Bank Assisted Programme being implemented under the Federal Ministry of Agriculture and Rural development (FMARD) in collaboration with other stakeholders (<https://appealsproject.com.ng>). The National Project Coordinator (NPC) APPEAL Project Mal. Muhammed Jobdi said APPEALS Project was approved by the World Bank on March 23 2017 and became disbursement effective on May 24 2018. The APPEALS Project is a Six years' project designed in line with the Green Alternative (2016 – 2020), the Agricultural Promotion Policy (APP) of the Federal Government of Nigeria and it is expected to close by September 2023.

The Mapping of Production clusters were being carried out across Kogi state and a total of 159 Commodity Interest Groups (CIGs) comprising 61 CIGs for rice 44 CIGs for cassava and 54 CIGs for cashew were mapped and geo-referenced across 23 clusters in the state (Nigerian Tribune 2020).

This study was carried out to assess the impact of APPEALS Project on cassava farmers in Kogi State with the aim to determine whether there is yield increase in cassava production under APPEALS Project implementation since 2020 to 2023.

Research Methodology:

Population of the Study

The population of the study comprises of registered farmers under the cassava value chain and the APPEALS Project team of extension agents and team lead who supervised the projects at different implementation stages in the three Senatorial District of the State

Study Area

The research was conducted in Kogi State which falls in the North Central region of Nigeria. According to Omole & Abayomi (2022), Kogi State occupies 29,833 Km² and it is

located between Latitude 7°30'N and Longitude 6°42'E in the southern Guinea Agro ecological Zone of Nigeria. The State consist of 3 Senatorial District namely; Kogi Central Senatorial District consisting of 5 LGAs, Kogi East Senatorial District consisting of 9 LGAs and the Kogi West Senatorial District consisting of 7 LGAs respectively as shown in the map below. Kogi State is characterized by a distinct wet and dry season with an elevation of 469.376m above sea level. An average annual temperature range of 38.2°C and receives an average of 696mm of precipitation annually. The state is famous for its productivity in business and agriculture,cultural diversity,hospitable citizens and beautiful landmarks. Kogi State who is currently governed by His Excellency, Yahaya Adoza Bello (GCON) has her per capita income estimated to be \$4,593 (www.kogistate.gov.ng)



Figure 1. Map of Kogi State showing the study area

Sampling Procedure and Sample size

Multi-stage sampling technique was used to select representative samples for this study. The first stage entailed a purposive selection of 13Cassava producing LGAs of the state cutting across the three Senatorial districts. The second stage was a simple random selection of thirty-five (35) CIGs from forty (40) wards of the selected LGAs. The last stage entails a random selection of three hundred and one (301) respondents from the 40 selected wards in the study area.

Data Collection

The data designed for the study was majorly primary data which was collected through the use of well-structured kobo toolbox questioner distributed to some beneficiaries (i.e. cassava farmers) across the three Senatorial District of Kogi State.

Data Analysis

The data collected was subjected to Descriptive Statistical Analysis to present Geographical Distribution and Socio-

economic characteristics of cassava farmers. (respondents). Information on socio-economic characteristics such as age, gender, marital status, land ownership, farming experience were presented in form of frequency counts, percentages, and tables.

Measurement of Variables

The variable considered for the study is Dependent variable and independent variable. The dependent variable of the study is the Income generated Cassava production while independent variables are; Age, gender, marital status, land ownership, Location, farming experience, farm mechanization support i.e. ploughing, harrowing and ridging, farm implements (sprayers, cutlasses, sacks etc.), farm inputs received i.e. fertilizers, stem cuttings and pesticides, training and transportation support (i.e. supply of vans and tricycles) and ease of market access.

Results and Discussion:

Participants	District	LGAs	Wards	No. of Household
A Cassava farmers	Central	Okene	Abuga/Ozuja	05
			Obehira/eba	05
			Onyukoko	05
		Okehi	Oboroke	05
			Ikuehi	05
			Okaito/Usungwe	05
		Ogori - magongo	Ugugu	05
			Ibinoye	05
			Otuwu opow	05
		Adavi	Nagazi - Uvete	05
			Adavi Eba	05
			Uro	05
		Ajaokuta	Old ajaokuta	05
			Geregu	05
			Ogigiri	05
B Cassava farmers	West	Ijumu	Ileteju	05
			Iyamoye	05
			Ekin Adde	05
		Kabba Bunu	Aiyeteju	05
			Okebukun	05
			Ogugu	05
		Kogi Koton Karfe	Irenuodu	05
			Lokoja	05
			Gegu	05
		Mopa Muro	Ileteju 1	05
			Orokere	05
			Aiye Dayo	05
C Cassava farmers	East	Dekina	Iyale	05
			Egume	05
			Anyigba	05
		Ibaji	Onyedega	05
			Ejule	05
			Unale	05
		Idah	Ede	05
			Sabon Garri	05
			Ichala	05
		Igalamela Odolu	Akpanya	05
			oforachi	05
			Oji Aji	05

Table 1. Distribution of Respondents in the study Area

Table 1 Shows the distribution of respondents in the study area. Random Population sampling revealed that 40 wards in 13 LGAs across the 3 Senatorial District of Kogi State

have beneficiaries (Cassava farmers) whose average household size is five (5).

Characteristics	Frequency	Percent (%)
Locations		
Kogi Central	58	19.26
Kogi West	110	36.54
Kogi East	133	44.18
Total	301	100
Age		
≤ 18	2	0.66

19 – 30	56	18.59
31 – 40	134	44.51
41 – 50	90	29.9
51 – 60	16	5.29
61 – 70	3	0.99
Total	301	100
Gender		
Female	98	32.56
Male	203	67.44
Total	301	100
Marital status		
Single	34	11.30
Married	166	55.15
Divorced	35	11.63
Separated	1	0.33
Widowed	65	21.59
Total	301	100.00
Land Ownership		
Rental	70	23.26
Inherited	61	20.27
Lease	114	37.87
Purchase	56	18.6
Total	301	100
No of Years in Farming		
3 – 5	83	27.58
6 – 9	218	72.42
Total	301	100

Source: Field Survey Kogi APPEALS Project (Mamman, et al., 2023)

Table 2: Socioeconomic Characteristics of Commodity Interest Group Farmers (Respondents) in Kogi State.

Table 2 presents the socioeconomic characteristics of the respondents in the study area. 0.66% of respondents were at or falls below the age of 18 years, 18.59 % fall within the age range of 19 – 30 years, 44.51 % were between 31 – 40 years, 29.9 % were between 41 – 50 years, 5.29 % were between 51 – 60 years and 0.99 % were above 60 years respectively. Respondents between the age group of 31 – 40 years had the highest participation in cassava farming (44.51%) and this result corroborates with the Yakubu (2015) findings whose studies has shown that young age groups are involved in massive agricultural production activities and adopt new technology faster than the older age. Similarly, 32.56% of the respondents were female cassava farmers while 67.44% were male cassava which reveals that male gender is more involved in cassava farming activities than their female counterparts. This result also agrees with Okwoche and Asogwa (2012) who posited that male dominancy in cassava production is due to the laborious nature of cassava farming operations and in the same vein with Obasi (2014) who has also stated that larger proportion of cassava-based contract farmers in South Eastern Nigeria are male. However, by this study APPEALS Project is in line with Adewale et al. (2005) who maintained that gender is no barrier to active involvement

in cassava production activities by being sensitive to gender discrimination. However, 11.30%, 55.15%, 11.63%, 0.33%, 21.59% of the respondents were single, married, divorced, separated and widowed respectively and more than half of the respondents were married, which is an indication that family needs in terms of food and finances would probably be high due to larger household size thus reducing the amount for sale and subsequently the revenue for the family. Adesina et al. (2000) confirms this in his report stating that large household sizes are more likely to face lower income per capita base on the need to be food sufficient thus reducing the income from the sale of the produce. As land ownership is being classified, 23.26% of respondents acquires land via rent, 20.27% acquires land through inheritance, 37.87% through Lease and 18.6% acquires land by outright purchase. This translate to the fact that majority of cassava farmers face problem of land tenure and hence limits cassava production in the area. Number of years in farming indicates that 72.42% of the total respondents examined have between 6 and 9 years in cassava farming while 27.58% have 3 – 5 years in cassava farming. This indicates that about $\frac{3}{4}$ of the total respondents have hands – on experience in cassava farming and have been able to

maintain and stabilize yield over time using traditional methods of farming in the study area.

Variables	Frequency	Percentage
APPEALS Project has supplied inputs i.e. Stem cutting, Pesticides and Fertilizers		
Yes	301	100
No	0	0
Total	301	100
The APPEALS Project has supported during land preparation in Ploughing and Ridging		
Yes	301	100
No	0	0
Total	301	100
The APPEALS Project has supported during land preparation i.e. Harrowing		
Yes	39	12.96
No	262	87.04
Total	301	100
APPEALS Project has supported farmers with farm tools/implement and machinery		
Yes	301	100
No	0	0
Total	301	100
APPEALS Project has provided training and workshop support to farmers		
No	0	0
Yes	301	100
Total	301	100
APPEALS Project increase farmers group Assets acquisition capability		
Yes	301	100
No	0	0
Total	301	100
APPEALS Project encourages cooperative society formation among beneficiaries		
Yes	301	100
No	0	0
Total	301	100
APPEALS Project increases infrastructural Development, housing and environmental sustainability		
Yes	301	100
No	0	0
Total	301	100
APPEALS Project has provided transportation means and linkage to market		
Yes	301	100
No	0	0
Total	301	100
APPEALS Project has enhanced farmers output		
Yes	301	100
No	0	0
Total	301	100

Table 3: Frequency Distribution of Farmers by Nature of support received from APPEALS Project intervention in Kogi State.

The nature of support received from APPEALS Project by the cassava farmers in Kogi state presented in Table 3. It is worthy of note that Kogi APPEALS Project has supported the farmers virtually in all aspects as listed in the table except the harrowing operation where only 12.96 % of respondents were supported leaving out the remaining 87.04%. This has been attributed to the high rate of waterlogging in those areas observed during tractor operation. Land preparation and supply of other inputs such as fertilizer and herbicides and monitoring of planting population by extension agents as well as transportation means of farm produce as provided by APPEALS Project are very vital in enhancing productivity and this finding agrees with Pelemo *et al.* (2020) who reported that access to extension will improve livelihood status of farmers in rural areas in Kogi and Niger states respectively. APPEALS

Project has provided full time (100%) training and workshop support to farmers, support cassava farmers with farm tools and implement (i.e sacks, cutlasses, hoes, Knapsack sprayers etc.), transportation means such as Vans, Keke among others. In addition, Kogi APPEALS has strengthened farmers access to market, asset acquisition capacity, formation of cooperative societies among themselves towards enhancing their access to credit facilities to expand production. These will enhance rural livelihood status and well-being of cassava farmers in Kogi State. This result is in accord with the findings of Tsado *et al* (2014) who reported that training of rice farmers should be given topmost priority to improve their skills on the adoption of improved rice packages in order to increase their productivity.

Recommended yield (MT/ha)	Yield (MT/ha) before APPEALS intervention	Freq.	Percent	Yield (MT/ha) after APPEALS intervention	Freq.	Percent
40	10-20	225	74.75	33-40	275	91.36
	21-29	76	25.25	41-68	26	8.64
	Total	301	100	301	301	100
	Mean Yield (x)	13.2 MT/ha (33.3%)			30.23 MT/ha (75.58%)	

Table 4. The Impact of APPEALS Project intervention on Cassava Output/Yield (t/ha) in Kogi State, Nigeria

Table 4 present the increase in Cassava yield upon the intervention of Kogi APPEALS project in the State it is evident from the table above those traditional methods of cassava farming and use of obsolete planting materials produced yield between 10 and 29MT per hectare. 74.75% of the respondents agreed to obtaining 10 – 20 MT/ha while 25.25% of respondents agreed to obtaining 21 – 29MT/ha in previous years before Kogi APPEALS project intervention. 91.36% of the respondents agreed to obtaining between 33 and 40MT/ha while 8.64% agrees to obtaining between 41 and 68 MT/ha respectively after the intervention programme. Mean yield of 13.2 MT/ha which represents 33.3 % of recommended yield before Kogi APPEALS intervention has increased to 30.23 MT/ha (75.58% of recommended yield of cassava) in the study area after Kogi APPEALS intervention. The impact of Kogi APPEALS Project can therefore be evaluated by comparing the monetary value of farmers' yield (income from cassava) before and after Kogi APPEALS project intervention relative to per capita income of cassava farmers in the State.

Total Yield (t/ha) and Annual Revenue (₦) of Cassava Farmers in relation to Per Capita Income of Kogi State before and After APPEALS Project intervention.

Market survey shows that a ton of cassava tubers is sold ₦ 400, 000.00 Average yield of 13.2 MT/ha before Kogi

APPEALS intervention is equivalent to ₦1.848 million which falls below the estimated per capita income (\$4,593) of an average cassava farmer in the State before APPEALS Project due to other expenses incurred as a consequence of inadequate support received earlier. However, yield increase of up to 30.23 MT/ha after Kogi APPEALS intervention is equivalent to about ₦7.564 million leaving a gross margin of ₦5.716 million which is quite far above the estimated per capita income of an average cassava farmer in Kogi State at the time of this research. This increase has indicate that APPEALS Project PDO,s if followed keenly will effectively enhance livelihood standard in areas of addressing food insecurity by boosting agricultural productivity and improving per capital income of the farmers in kogi state.

Conclusion

Based on this research, it can be concluded that the Kogi APPEALS Project has:

- Supported cassava farmers in improving productivity at all stages of production within the state.
- Provided infrastructural, mechanical, and extension services that facilitated farm operations and reduced labor intensity.
- Increased cassava yields in the state by supplying

inputs such as improved stems, pesticides, and fertilizers.

- iv. Significantly improved the livelihood of cassava farmers, resulting in incomes that exceed the state's per capita income.

Acknowledgement

This research therefore makes the following recommendations.

- i. That the APPEALS project be made sustainable to continue their activities of impacting positively in the livelihood through supports ranging from inputs, farm implement and machineries, transportation means, access road rehabilitation, training and housing infrastructure which has contributed immensely to farmers income and economic growth of Cassava farmers in the state.
- ii. That their mandate (PDO) be expanded to reach out to more areas of Agriculture like crop breeding, animal husbandry, wildlife conservation that will steer rapid economic growth and development in the state.

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