

ACCESSIBILITY TO AGRICULTURAL INFORMATION AND TRAINING INTERVENTIONS ON ECONOMIC GROWTH OF CASH CROP FARMERS IN BENUE STATE, NIGERIA.

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ABSTRACT

The study investigated the accessibility to agricultural information and training interventions on economic growth of cash crop farmers in Benue state, Nigeria. Three research questions guided the study in line with the objectives. The study adopted descriptive survey research design. The population of the study comprised 1,276 cash crop farmer across the three senatorial district of Benue state, Nigeria. Multi-stage sampling technique was used to sample 638 cash crop farmers in the three senatorial District of Benue state. Structured questionnaire was used as a research instruments for data collection. Out of 638 copies of questionnaire distributed, 595 copies were filled, returned and used for the analysis representing 93.2%. Data were analysed using frequency counts, percentages, mean and standard deviation. Findings of the study revealed that the level of economic growth of cash crop farmers in Benue State, Nigeria was high, accessibility to agricultural information influence on economic growth was positive and training interventions influence on economic growth was positive. The study concluded that there is need to enhance the effectiveness of agricultural information dissemination methods. The study recommended that targeted training programs should be designed to address the specific knowledge gaps focusing on practices that directly impact productivity and enhance economic growth.

Keywords: Agricultural Information, Cash Crop Farmers, Economic Growth, Training Interventions, Benue State, Nigeria.

Introduction

The pursuit of sustainable economic growth has become increasingly challenging amid the global economic downturn, particularly for nations reliant on a single resource. In Nigeria,

this challenge is starkly evident due to its heavy dependence on crude oil, necessitating diversification of its economic base (International Monetary Fund, 2022; World Bank, 2023). Benue State, located in Nigeria's North-Central region, faces unique developmental hurdles while striving for economic growth, particularly as an agrarian economy reliant on cash crop production (Nigerian Economic Summit Group, 2021; Food and Agriculture Organization, 2022).

Economic growth is the increase in production and consumption of goods and services measured by Gross Domestic Product (GDP), reflects a country's economic health and potential for improving living standards (Potters, 2023). The significance of economic growth extends to job creation and business expansion, fostering higher employment and income levels (Australian Bank, 2019). Definitions from various sources, including the IMF, emphasize the sustained increase in productive capacity as essential to understanding economic growth (IMF, 2020; Roser, 2021). In Benue State, agriculture plays a pivotal role, accounting for approximately 75% of income and employment while underpinning two-thirds of value-added manufacturing (Shaibu, 2022). The region is often referred to as Nigeria's "food basket" due to its fertile land supporting diverse cash crops such as sorghum, maize, rice, and cassava. Cash crops, primarily produced for profit rather than personal consumption, significantly contribute to the state's economy and offer potential for export (Olawepo, 2021).

Agricultural information is recognized as a critical resource, facilitating better decision-making and productivity among farmers. Timely access to information regarding weather, market trends, and agricultural best practices is essential for enhancing farm output and economic growth (Bachhav, 2012; Rahman et al., 2020). Training interventions, such as extension services and farmer field schools, aim to equip farmers with the knowledge and skills necessary for modern agricultural practices (Stewart, 2016; Mancini et al., 2021). These programs foster innovation and adaptability, vital for sustaining agricultural productivity and economic resilience. Innovations in agricultural practices, both at micro and macro levels, are essential for addressing challenges like food security and climate change. Techniques such as precision agriculture and integrated pest management enhance productivity while promoting environmental sustainability (Heck et al., 2021; Altieri and Nicholls, 2020). Additionally, macro-level innovations, including global agricultural policies and innovative financing mechanisms, support smallholder farmers and sustainable practices (FAO, 2020; Ünüvar, 2019). The economic landscape of Benue State exemplifies the critical need for diversified agricultural practices and informed decision-making to achieve sustainable economic growth amidst broader national challenges. This study aims to explore the interplay between agricultural information, cash crop production, and economic diversification in driving economic growth in Benue State.

STATEMENT OF THE RESEARCH PROBLEM

In Benue State of Nigeria, cash crop farming represents a crucial component of the local economy, contributing significantly to the livelihoods of many rural families. However, the economic growth of these cash crop farmers is currently impeded by several critical challenges. Despite the potential for substantial economic benefits from cash crop production, farmers in this region face issues such as inadequate access to agricultural information, insufficient training, and limited resources for modern farming techniques. These barriers have led to suboptimal agricultural practices, reduced crop yields, and ultimately, stagnated economic growth within the region. Could these challenges be due to lack of access to agricultural information and training interventions programmes? To address these economic challenges faced by cash crop farmers in Benue State, Nigeria. The

researchers investigate accessibility to agricultural information and training interventions on economic growth of cash crop farmers in Benue State, Nigeria.

OBJECTIVES OF THE STUDY:

The objectives were to:

1. determine the level of economic growth of cash crop farmers in Benue State, Nigeria;
2. ascertain the accessibility to agricultural information influence on economic growth of cash crop farmers in Benue state, Nigeria;
3. determine the training interventions influence on economic growth of cash crop farmers in Benue State, Nigeria.

Research Questions

The following research questions guided the study:

1. What is the level of economic growth of cash crop farmers in Benue State, Nigeria?
2. How does accessibility to agricultural information influence economic growth of cash crop farmers in Benue State, Nigeria?
3. How does training interventions influence economic growth of cash crop farmers in Benue state, Nigeria?

LITERATURE REVIEW

A growing body of literature underscores the critical role of agricultural information and training interventions in enhancing production and economic growth across various contexts especially in the agricultural sector. Mensah *et al.* (2023) conducted a study on access to and use of agricultural information among Maize Farmers in Ejura Sekyedumase Municipality of the Cross River State, Nigeria. The cross-sectional survey design was used for the study. 170 farmers responded to the research questionnaire. The findings revealed that the most utilized source of agricultural information by maize farmers in Ejura Sekyedumase Municipality was agricultural extension agents. It was also observed that there was a significant relationship between farm ownership type, educational level, access to credit, extension visits, farming experience, and access to agricultural information. The study also found that the main agricultural information needs of the maize farmers in Ejura Sekyedumase Municipality of the Cross River State were disease and pest management. The study concluded that the inadequate number of extension agents was the main challenge faced by farmers in accessing and using agricultural information in the municipality. The study recommended that Government should employ more extension workers to bridge the gap of accessibility and use of agricultural information.

Fan *et al.* (2022) conducted a study to investigate commercial cash crop production and households' economic welfare: Evidence from the pulse farmers in rural China. The study adopted endogenous treatment regression (ETR) method. The objectives were to

investigate the determinants of household behaviour in commercial pulse farming and examined how households' commercial pulse production improves their economic welfare. The population comprised Eight Hundred and Forty-Eight (848) households collected from 2018 to 2019 to estimate the determinants of household behaviour in commercial pulse farming by the Heckman two-step model. Findings showed that factors such as market purchase prices, agricultural technology services, farmers' access to loans, and government subsidies promoted small-holders' commercial pulse farming; production costs and perceptions of climate change risks constrained smallholders' commercial pulse production. The study concluded that commercial pulse production had increased house-hold farmers' income but there was a limited impact on household off-farm income. The study recommended that policies aiming to increase households' cash crop production and market access could significantly improve the economic welfare of pulse farmers and the GDP of China at large.

Adetimehin *et al.* (2018) conducted a study to investigate the utilization of agricultural information and knowledge to enhance rice production among farmers in Ondo state, Nigeria. The study adopted the multi-stage random sampling technique, the researchers surveyed Eighty (80) respondents, revealing various information needs among rice farmers, including pest and disease management practices, mechanical land preparation and planting techniques, use of farm machinery, improved storage methods, and access to agricultural credit/loans. The primary sources of information utilized by respondents were friends and relatives, as well as radio broadcasts. The study found that respondents demonstrated high levels of access to and utilization of agricultural information and knowledge related to improved rice production practices, with mean scores of 3.23 for both variables. Furthermore, the results of linear regression analysis indicated a significant relationship between farm size and the utilization of agricultural information and knowledge ($b=0.802$, $t=12.104$; $p < 0.05$). Consequently, correlation analysis revealed a significant positive relationship between respondents' access to extension services and their utilization of agricultural information and knowledge ($r=0.259$; $p < 0.05$). The study concluded that agricultural information and knowledge sharing related would improve rice production practices and economic growth.

Runganga *et al.* (2021) conducted a study to investigate the impact of agriculture on economic growth in Zimbabwe. The study adopted the Auto-regressive Distributed Lag (ARDL) estimation technique, employing data from 1970 to 2018. In the short run and long run. Findings revealed that inflation, government expenditure, and gross fixed capital formation have a positive impact on economic growth. The study further found that agricultural production had a positive impact on economic growth in the short run, and no impact on economic growth was found in the long run. Thus, the agricultural sector plays an important role in the early stages of economic development, and when the economy has developed, agriculture plays a minimal role. It is evident from the results of this paper that agriculture is an engine for growth in the short run. The study concluded that agriculture need to be supported. The study recommended that should macro-economic policies should be put in place to promote economic growth in the long run.

Jamshed and Fatima (2019) conducted a study to investigate the contribution of agriculture to economic growth: A case study of West Bengal (India) to ascertain the importance of agriculture in the economic growth of West Bengal. Agriculture, being the source of livelihood and supplier of raw material to various industries, triggers economic growth of the nation. Their study exhibits how agriculture contributed to West Bengal's

economic excellence using empirical data and a counter-action analysis. The role of agriculture is examined on four contributions: (i) product contribution (forward linkage), (ii) market contribution (backward linkage), (iii) factor contribution, and (iv) foreign exchange contribution. The composition and growth of the sectors and its association with other sectors were analysed using time series analysis. The findings of the study revealed that agricultural sector has appeared as most important contributor to drive West Bengal economic growth even after declining share in gross state domestic product over the years. The study concluded that agricultural sector had long run causal linkages with industry, services, and overall economic growth in West Bengal.

Table 1: Responses on level of economic growth

S/N	STATEMENTS	VHL 1	HL 2	LL 3	VLL 4	N	FX	X	STD	Decision X >= 2.50
Expenditure Approach										
1	Agricultural information on cost of improved seeds guides me on the type of seeds to purchase to boost my farm production thus enhancing economic growth.	7	0	268	320	595	2091	3.51	0.567	High level
2	Agricultural information on the procurement and use of fertilizers guides me on the type of fertilizer suitable for yielding cash crops and this enhance economic growth.	7	0	265	323	595	2094	3.52	0.566	High level
3	Training intervention on agricultural practice innovations improves my knowledge on cash crops farming thus enhancing economic growth.	7	0	374	214	595	1985	3.34	0.542	High level
Production (Output) Approach										
4	Agricultural information on current tillage methods improves my farm production and this enhance economic growth.	7	0	346	242	595	2013	3.38	0.554	High level
5	Agricultural information on right time of planting improves my farm production thus enhancing economic growth.	7	0	298	290	595	2061	3.46	0.566	High level
6	Training intervention on agricultural input innovations improves my farm production and this enhance economic growth.	7	0	269	319	595	2090	3.51	0.567	High level
Income Approach										
7	Agricultural information on application of improved techniques improves farm production which increase my income and this enhance economic growth.	25	18	132	420	595	2137	3.59	0.745	High level
8	Agricultural information on management of pest and diseases improves farm production which increase my income thus enhancing economic growth.	7	13	345	230	595	1988	3.34	0.583	High level
9	Training intervention on technical input innovations improves farm production which increase my income and this enhance economic growth.	7	36	201	351	595	2086	3.51	0.665	High level
Average Weighted Mean								3.48	0.66	

Key: VHL = Very High Level; HL= High Level; LL= Low Level; VLL=Very Low Level, X = *Mean*; STD = *standard deviation*

The data presented in Table 1 was analysed for the level of economic growth of cash crop farmers in Benue State, Nigeria. The results in Table 1 showed that the respondents agreed to all the statements as average weighted mean score was 3.48, which indicated a general agreement among respondents that agricultural information and training interventions are critical for enhancing economic growth. Furthermore, the findings reveal a strong recognition among cash crop farmers in Benue State of the importance of agricultural information and training for enhancing farm production and economic growth.

Table 2: Responses on accessibility to agricultural information on economic growth

S/N	STATEMENTS	SD 1	D 2	A 3	SA 4	N	FX	X	STD	DECISION X>=2.50
1	Easy accessibility to agricultural information would enable me to boost my farm production thus enhancing economic growth.	58	86	322	129	595	1712	2.88	0.859	Agree
2	Easy accessibility to agricultural information would enable me to procure agricultural loan and this enhance economic growth.	94	50	273	178	595	1725	2.90	1.003	Agree
3	Easy accessibility to agricultural information would enable me to participate in agricultural cooperatives and this enhance economic growth.	103	92	257	143	595	1630	2.74	1.011	Agree
4	Easy accessibility to agricultural information would enable me to know the current prices of farm produce and this enhance economic growth.	50	116	218	211	595	1780	2.99	0.942	Agree
5	Easy accessibility to agricultural information would enable me to know the areas of agriculture to invest thus enhancing economic growth.	83	54	242	216	595	1781	2.99	1.007	Agree
6	Easy accessibility to agricultural information would enable me to have an idea on current agricultural innovations thus enhancing economic growth.	60	95	323	117	595	1687	2.84	0.857	Agree
7	Easy accessibility to agricultural information would enable me to know the higher yield crops and this enhance economic growth.	82	55	317	141	595	1707	2.87	0.930	Agree
8	Easy accessibility to agricultural information would enable to have an idea on irrigation management thus enhancing economic growth.	70	75	250	200	595	1770	2.97	0.966	Agree
Average Weighted Mean								2.90	0.95	

Key: SA =Strongly agree; A=Agree; D= Disagree; SD= Strongly Agree, X = Mean; STD = standard deviation

The data in Table 2 was analyzed for accessibility to agricultural information influence on economic growth of cash crop farmers in Benue State, Nigeria. The results in Table 2 reveal that the respondents agreed to all the statements as average weighted mean score was 2.90, which indicated that respondents generally agreed that accessibility to agricultural information positively influences their economic growth. This is a recognition among cash crop farmers in Benue State, Nigeria of the critical role information access plays in enhancing their agricultural practices and economic outcomes.

Table 3: Responses on training interventions on economic growth

S/N	STATEMENTS	SD 1	D 2	A 3	SA 4	N	FX	X	STD	DECISION X>=2.50
49	Training interventions on commercial agriculture would increase my knowledge on commercial farming and this enhance economic growth.	98	87	274	136	595	1638	2.81	0.952	Agree
50	Training interventions on soil management would help me to boost farm production thus enhancing economic growth.	73	81	267	174	595	1732	2.91	0.955	Agree
51	Training interventions on fertilizer applications would aid yielding of my farm crops and this enhance economic growth.	84	70	206	235	595	1782	2.99	1.039	Agree
52	Training interventions on new crop varieties would improves my farm production thus enhancing economic growth.	105	48	320	122	595	1649	2.77	0.970	Agree
53..	Training interventions on drip irrigation system would increase my productivity and this enhances economic growth.	105	29	177	284	595	1830	3.08	1.108	Agree
54	Training interventions on information communication technology (ICT) would increase the entire farming productivity thus enhancing economic growth.	7	155	273	160	595	1776	2.98	0.760	Agree
Average Weighted Mean								2.92	0.96	

Key: SA = Strongly agree; A=Agree; D=Disagree; SD=Strongly Agree, *X = Mean; STD = standard deviation*

The data in Table 3 was analyzed for training interventions influence on economic growth of cash crop farmers in Benue State, Nigeria. The results in Table 3 reveal that the respondents agreed to all the statements as average weighted mean score was 2.92, which indicated that respondents generally agreed that training interventions are beneficial for enhancing their economic growth. This reflects a strong recognition among farmers of the positive impact that targeted training can have on their agricultural practices and productivity to enhance economic growth.

DISCUSSION OF FINDINGS

Research question one sought to determine the level of the economic growth of cash crop farmers in Benue State, Nigeria. The results showed that the average weighted mean score across all statements was 3.48, which indicates a general agreement among respondents that agricultural information and training interventions are critical for enhancing economic growth. The emphasis on the importance of agricultural information and training interventions among cash crop farmers aligns with findings from Mensah *et al.* (2023), who identified the pivotal role of agricultural extension agents in disseminating crucial information to farmers. Both studies underscore the significant impact that access to reliable agricultural information has on farmers' economic outcomes, suggesting that enhancing training and information availability could lead to improved agricultural productivity. The findings from the study demonstrate a multifaceted understanding of economic growth through various approaches expenditure, production, and income. This complexity mirrors the findings in Taylor *et al.* (2019), which explored the local economic impacts of cash crop promotion and suggested that cash crop production positively influences household incomes. While Taylor *et al.* focused on Uganda, the underlying principle that improved agricultural practices lead to better economic outcomes is consistent across both studies.

Research question two sought to ascertain the accessibility to agricultural information on economic growth of cash crop farmers in Benue State, Nigeria. The results showed that the average weighted mean score across all statements was 2.90 which indicated that Cash crop farmers in Benue State, Nigeria generally agreed that accessibility to agricultural information significantly influences their economic growth. This aligns with the findings of Runganga *et al.* (2021), which indicate a positive relationship between agricultural production and economic growth, particularly in the short run. Both studies affirm the necessity of improving access to agricultural information to foster economic development.

Research question two sought to determine the training interventions on economic growth of cash crop farmers in Benue State, Nigeria. The results showed that the average weighted mean score across all statements was 2.92 which indicated that Cash crop farmers in Benue State, Nigeria generally agreed that training interventions positively influence economic growth. This aligns with the perspective presented by Fan *et al.* (2022) that highlights how access to agricultural technology and training enhance economic welfare among farmers. The recognition of various training interventions as beneficial underscores the potential for tailored programs that address specific farmer needs.

RECOMMENDATIONS

Based on the findings, the following recommendations were made by the researchers as follows:

1. There should be a pressing need to enhance the effectiveness of agricultural information dissemination methods that would help to boost productivity and enhance economic growth.
2. Policymakers should develop more engaging and accessible ways for farmers to easily access agricultural information beyond traditional means and incorporate digital tools and community-based approaches.
3. Targeted training programs should be designed to address the specific knowledge gaps identified in the study. This includes focusing on practices that directly impact productivity and economic growth. Incorporating innovative training methods that utilize ICT can help bridge the existing knowledge gaps among farmers.

CONCLUSION

Based on the findings, the research has established a strong recognition among cash crop farmers in Benue State of the critical role that agricultural information and training interventions play in enhancing farm production and promoting economic growth. The findings confirm that farmers have specific information needs, particularly in areas such as pest management, post-harvest techniques, and the effective use of fertilizers and improved seeds. However, despite this recognition, the current methods of accessing agricultural information and training interventions are perceived as ineffective, as indicated by an aggregate mean score of 2.29, which falls below the threshold for agreement.

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