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Improved Cocoa Production Technologies' Utilisation and Rural Households' Wellbeing in Cross River State, Nigeria

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Abstract

The study analysed the utilisation of improved cocoa production technologies and rural households' well-being in Cross River State, Nigeria. A multi-stage sampling procedure was employed in the study, and data were collected from 120 respondents using a structured questionnaire. Percentages mean and simple linear regression were used for data analysis. Major findings show that there was a high level of utilisation of the improved cocoa production technologies, with a grand mean of 3.38. Furthermore, the general well-being status of the rural households was not high ($\bar{x}$=2.58) as against the perceived effect of utilisation of improved cocoa production technologies on the well-being of rural households ($\bar{x}$=3.31). However, a t-value of 1.368 indicates that the utilisation of improved cocoa production technologies does not have a significant effect on the well-being of rural households. It is concluded that the utilisation of improved cocoa production technologies by the members of the rural households did not have any significant effect on their well-being status; therefore, it is recommended that the State government should introduce a price regulatory mechanism for the cocoa enterprise to improve the well-being of rural households in the study area.

Keywords: Rural households; Wellbeing; Improved cocoa production technologies

INTRODUCTION

Cacao (*Theobroma cacao*) is mostly produced in Nigeria, which ranks fourth in the world in terms of cocoa exports, behind Ghana, Indonesia, and Cote d'Ivoire. Nigeria's primary agricultural export is cocoa, which contributes 0.3% of the country's agricultural

GDP. In the first quarter of 2022, Nigeria's earnings from exports accounted for around 41.6% of its foreign exchange earnings, which came from raw cocoa beans, which brought in N122.9 billion (Agency Report, 2022). However, the emergence of petroleum as a foreign exchange earner ignited a chain reaction that led to the total neglect of the development of agriculture (Onu et al, 2024)

According to Afolayan (2020), the States of Akwa-Ibom, Cross River, Delta, and Edo are among those States in the South-South zone of Nigeria that produce cocoa. Amongst the eighteen Local Government Areas (LGAs) in Cross River State, fourteen of them are known to produce cocoa, making the state the second largest producer of cocoa in Nigeria, cultivating the biggest land area, covering 327.91 hectares, while Akwa Ibom, Delta, and Edo States followed closely behind.

The Nigerian Cocoa Research Institute (CRIN) has developed a number of technological advancements and improvements that may lessen the difficulties Nigerian cocoa farmers encounter in growing and processing cocoa. According to Obinna and Onu (2021), technology information usage refers to the physical and mental acts involved in incorporating improved technologies found, into farmers existing technology base. The technologies that are essentially production-focused are meant to assist farmers in increasing their yields. Improved seedlings, suggested fertilizer rates and applications, suggested herbicide and pesticide rates and applications, and enhanced management technologies are some of these production technologies. The goal of all these enhanced cocoa production technologies being made available to farmers is to raise the standard of living for thousands of rural households that primarily rely on cocoa farming by increasing yield per hectare, which will raise income and enhance the social, psychological, and economic well-being of these households (Ukoha et al, 2024).

Wellbeing is a term used synonymously with a wide range of concepts, including self-esteem, self-efficacy, self-determination, resilience, quality of life, mood enhancement, positive mental health, life satisfaction, and worthwhileness (Huppert, 2017 cited in Ukoha and Kalu, 2026).

Similarly, it did not appear that using the upgraded technologies for cocoa production had raised the living standards and social standing of the rural households in the research area above average. This is on top of the apparent dissatisfaction and sense of self-actualization among rural households, which may deter them from turning to cocoa farming as a means of livelihood. These, therefore, raise so many questions to which the study tends to find answers, among which is to provide empirical evidence that will actually show if the well-being of the rural households in the study area has been improved through the utilization of the improved cocoa production technologies. The specific objectives of the study were to:

1. ascertain rural households' level of utilization of improved cocoa production technologies;
2. determine the wellbeing status of the rural households; and,
3. ascertain the perceived effect of utilization of improved cocoa production technologies on rural households' wellbeing in the study area.

METHODOLOGY

Study Area

The study was carried out in Cross River State, Nigeria. Cross River State is a State in the South-South geopolitical zone of Nigeria. It borders to the north through Benue State, to the west through Ebonyi State and Abia State, and to the southwest through Akwa Ibom State, while its eastern border forms part of the national border with Cameroon (Okeowo and Fatoba, 2022).

The climate of Cross River State is tropical. Not only this, but the state is also characterized by relative humidity. The average temperature of the state is between 15°C and 30°C. However, this climatic condition is different in locations within the Cross River State, such as the high plateau of Obudu, which has a record of a fall in temperature between 4°C and 10°C, as a result of the high altitude of this area. The capital city of the state, Calabar, has a significant record of rainfall within the year, while the dry season has less significant effect in the state due to the depth of rainfall experienced. Based on the records presented by the climate data of the state, the annual rainfall of Cross River state is 3306 mm (130.2 inches).

Population of the Study

The population of the study was made up of all rural households involved in cocoa farming in the Cross River State of Nigeria.

Sampling Procedure and Sample Size

A multistage sampling procedure was employed to select the sample for the study. It employed purposive sampling, selecting three Local Government Areas – Boki, Etung and Ikom, LGAs due to the level of cocoa farming in the area. In the 2nd stage, four communities were equally purposively selected from each LGA, bringing the total number to 12 communities. These communities were Boki LGA (Bashua, Abonorok, Oriemekpung and Kanyang), Etung LGA (Benedeghe, Abia, Benedeghe Farm and Agbokim) and Ikom LGA (Ekparabong, Ikom, Nde and Okuni). In the 3rd and final stage, 10 rural households were purposively selected from each of the communities to give rise to a total of 120 rural cocoa households that were used for the study.

Data for the study were generated from primary sources using a structured questionnaire to elicit information from the rural households and were analyzed using both descriptive and inferential statistics such as Percentages, mean and simple linear regression.

Level of utilization of improved cocoa production technologies, was measured using a 4-point rating scale of Always, Sometimes Rarely and Never which were scored 4, 3, 2, and 1, respectively. The benchmark was obtained thus: 4+3+2+1 = 10, divided by 4 to give 2.50. This implies that any mean score responses below the benchmark mean (less than 2.50) were adjudged to be a low level of utilization of improved cocoa production technologies, while 2.50 – 2.99 was said to be a moderate level of utilization,

and 3.00 and above (≥ 3.00) were adjudged to be a high level of utilization of improved cocoa production technologies.

The well-being status of rural households was measured using the Indicators of Social Well-Being (Keyes, 1998), Ryff's measurement scale for psychological well-being (PWB) (Ryff and Keyes, 1995), and the Nigeria Core Welfare Indicator Questionnaire Survey (NBS, 2006) for economic well-being, as were all cited in Ukoha et al. (2024). Then a 4-point rating scale was used, that is, strongly agreed = 4, agreed = 3, disagreed = 2, and strongly disagreed = 1. The benchmark was obtained thus: 4+3+2+1 = 10, divided by 4 to give 2.50. This implies that any mean score responses below the benchmark mean (less than 2.50) were adjudged to be low levels of social, economic, and psychological well-being status, respectively, while 2.50–2.99 was said to be a moderate level of well-being status, and 3.00 and above (≥ 3.00) were adjudged to be high levels of social, economic, and psychological well-being status, respectively. Finally, the respective mean scores were summed up and divided by 3 to get the mean score for total well-being.

The perceived effect of improved cocoa production technologies' utilization on rural households' well-being, was measured using a 4-point rating scale also that was scored as follows: strongly agreed = 4, agreed = 3, disagreed = 2, and strongly disagreed = 1. The benchmark was obtained thus: 4+3+2+1 = 10, divided by 4 to give 2.5. This implies that any mean score responses above the benchmark were adjudged as having a serious perceived effect, while any mean score responses lower than the benchmark were viewed as otherwise.

Model Specification

H_0: Level of utilization of improved cocoa technologies does not have a significant effect on the well-being of the rural households in Cross River State. This hypothesis was tested with simple linear regression. This is explicitly expressed thus:

$Y = a + b_0 + X, e_i$; Where,

Y = Level of utilization of improved cocoa production technologies (mean scores)

X = Well-being of rural households (mean scores)

a = Regression Constant

b_0 = Regression Coefficient

ei = error term

Level of Utilization of Improved Cocoa Production Technologies

The most utilized improved cocoa production technology by the farmers was control of black pod disease with fungicides ($\bar{x}$=3.91). This was closely followed by fermentation and drying of cocoa pods ($\bar{x}$ = 3.84) and control of capsids with insecticides ($\bar{x}$ = 3.63).

However, coppicing and grafting of cocoa trees (x̄ = 2.87) and improved seedlings (x̄ = 2.63) came 9th and 10th, respectively, recording moderate levels of utilization. This could be as a result of the fact that coppicing is always done when a cocoa tree is diseased and old. Hence, it may only be utilized when the need arises. This agrees with the finding of Akinpelu, Lawal, Ibiremo, and Ogunwolu (2021).

The grand mean of 3.38 recorded above the benchmark mean shows that there is a high level of utilization of improved cocoa production technologies in the study area. This finding corroborates the findings of Nwokocha (2022) that farmers accept and utilize innovations when they are fully aware of the relevance of the innovation.

Table 1: Distribution of Cocoa farmers based on Level of Utilization of Improved Cocoa Production Technologies

Improved Cocoa Technologies	$\bar{x}$	Rank	Remark
Improved Seedlings	2.63	10th	Moderate
Weed control (cultural maintenance)	3.51	5th	High
Control of black pod disease with fungicides	3.91	1st	High
Fertilizer application	3.42	6th	High
Control of capsids with insecticides	3.65	3rd	High
Weed control with herbicides	3.11	8th	High
Fermentation and drying	3.83	2nd	High
Complete farm and phased farm replanting	3.56	4th	High
Coupon regeneration	3.30	7th	High
Coppicing and grafting	2.87	9th	Moderate
Grand Mean	**3.38**		**High**

Source: Field Survey Data, 2024

Note: ≤ 2.49 = Low level of Utilization; 2.50 – 2.99 = Moderate level of Utilization and ≥ 3.00 = High level of Utilization

Wellbeing Status of Rural Households

Social Wellbeing Status of Rural Households

The results presented in Table 2a are the social wellbeing status of rural households in the study area. The entries show that the mean of social integration (how much they feel as part of their communities) ranked highest (x̄ = 2.94), followed by social coherence (how much they understand and are in harmony with their communities) (x̄ = 2.60) and social actualization (how much potential they feel they are living up to) (x̄ = 2.59). The results imply that the members of the rural households are well integrated socially; they very much feel a part of the society. This could equally be a result of fulfilment from accepting and utilizing cocoa production techniques. Furthermore, they are contributing their quota in society, and there is alignment and harmonious order in their social relationships with others. The grand mean (x̄ = 3.06) indicates that the social wellbeing status of the rural households in the study area was not high.

Table 2a: Mean Responses of the Statuses of Social Wellbeing of Rural Households in Cross River and Akwa Ibom States

SOCIAL WELLBEING VARIABLES	$\bar{x}$	Status	Rank
Social Integration			
I don't feel I belong to anything I would call a community	**1.62**	Low	
I feel like I am an important part of my community	**2.88**	Moderate	
If I had something to say, I believe people in my community would listen to me	**3.31**	High	
I feel close to other people in my community	**3.43**	High	
I see my community as a source of comfort	**3.45**	High	
Mean	**2.94**	**Moderate**	**1st**
Social Acceptance			
I believe that people are kind and not self-centered	**3.14**	High	
I feel that people are not trustworthy and reliable	**2.06**	Low	
I think that people live only for themselves	**2.11**	Low	
I believe that people are more and more dishonest these days	**2.55**	Moderate	
I think that people care about other people's problems	**3.07**	High	
People who do a favor expect nothing in return	**2.45**	Low	
Mean	**2.56**	**Moderate**	**4th**
Social Contribution			
My behavior has some impact on other people in my community	**3.48**	High	
I think I have something valuable to give to the world	**3.11**	High	
My daily activities do not produce anything worthwhile for my community	**1.98**	Low	
I don't have the time or energy to give anything to my community	**1.94**	Low	
I think that my work provides an important product for society	**2.82**	Low	
I feel I have nothing important to contribute to society	**1.89**	Low	
Mean	**2.54**	**Moderate**	**5th**
Social Actualization			
I believe that society has stopped making progress	**1.91**	Low	
Society isn't improving for people like me	**1.93**	Low	
I don't think social institutions like Law and Government make my life better	**2.19**	Low	
I see society as continually evolving	**3.25**	High	
I think our society is a productive place for people to live in	**3.24**	High	
For me there's no such thing as social progress	**2.23**	Low	
I think the world is becoming a better place for everyone	**3.38**	High	
Mean	**2.59**	**Moderate**	**3rd**
Social Coherence			
The world is too complex for me	**2.07**	Low	
Scientists are the only people who can understand how the world works	**2.18**	Low	
I cannot make sense of what's going on in the world	**2.28**	Low	
Most cultures are so strange that I cannot understand them	**2.83**	Moderate	
I think it's worthwhile to understand the world I live in	**3.21**	High	
I find it hard to predict what will happen next in society	**3.09**	High	
The world is too complex for me	**2.54**	Moderate	
Mean	**2.60**	**Moderate**	**2nd**
Grand Mean	**2.65**	**Moderate**	

Source: Field Survey Data, 2024

Note: ≤ 2.49 = Low Social wellbeing status; 2.50 – 2.99 = Moderate Social wellbeing status and ≥ 3.00 = High Social wellbeing status

Psychological Wellbeing Status of Rural Households

The mean responses of the psychological well-being status of the rural households in the study area are presented in Table 2b. The mean of variables under “Purpose in life” had the highest mean of 3.17. This was followed by those under “Self-Acceptance” ($\bar{x}$ = 2.76) and “Personal growth” ($\bar{x}$ = 2.73). This implies that members of the rural households have strong goal orientation and conviction that life holds meaning, thereby corroborating the findings of Muttagin (2022). Hence, the grand mean of 2.76 indicates

a moderate psychological well-being status among the rural households in the study area.

Table 2b: Mean Responses of the Statuses of Psychological Wellbeing of Rural Households in Study Area

PSYCHOLOGICAL WELLBEING VARIABLES	$\bar{x}$	Status	Rank
Autonomy			
In general, I feel I am in charge of the situation in which I live	3.31	High	
I am not interested in activities that will expand my horizons	2.09	Low	
I live life one day at a time and don't really think about the future	1.75	Low	
When I look at the story of my life, I am pleased with how things have turned out	2.44	Low	
My decisions are not usually influenced by what everyone else is doing	3.01	High	
Mean	**2.52**	**Moderate**	**5th**
Environmental Mastery			
I do not fit very well with people and the community around me	2.09	Low	
I feel like many of the people I know have gotten more out of life than I have	2.23	Low	
I am quite good at managing the many responsibilities of my daily life	3.21	High	
I don't have a good sense of what it is I'm trying to accomplish in life	2.18	Low	
I judge myself by what I think is important, not by the values of what others think is important	3.24	High	
I do not enjoy being in new situations that require me to change my old familiar ways of doing things	2.11	Low	
I have been able to build a home and a lifestyle for myself that is much to my liking	3.23	High	
Mean	**2.61**	**Moderate**	**4th**
Personal Growth			
I like most aspects of my personality	3.56	High	
The demands of everyday life often get me down	2.27	Low	
When I think about it, I haven't really improved much as a person over the years	2.66	Moderate	
My daily activities often seem trivial and unimportant to me	2.08	Low	
I have the sense that I have developed a lot as a person over time	3.09	High	
Mean	**2.73**	**Moderate**	**3rd**
Positive Relations with others			
People would describe me as a giving person	**1.88**	**Low**	
I am willing to share my time-out with others	**2.23**	**Low**	
I always take up responsibilities on others behalf	**3.15**	**High**	
I always give people attentive ears	**1.81**	**Low**	
Mean	**2.27**	**Low**	**6th**
Purpose in Life			
I have a sense of direction and purpose in life	3.52	High	
I sometimes feel as if I've done all there is to do in life	2.63	Moderate	
I tend to worry about what other people think of me	3.15	High	
I have confidence in my opinions, even if they are contrary to the general consensus	3.47	High	
For me, life has been a continuous process of learning, changing, and growth	3.45	High	
I have difficulty arranging my life in a way that satisfying to me	2.74	Moderate	
I enjoy making plans for the future and working to make them a reality	3.51	High	
In many ways, I feel disappointed about my achievements in life	2.88	Moderate	
Mean	**3.17**	**High**	**2nd**
Self-Acceptance			
I often feel overwhelmed by my responsibilities	3.10	High	
Some people wander aimlessly through life, but I am not one of them	3.01	High	
I gave up trying to make big improvements / changes in my life a long time ago	1.88	Low	
I feel good about who I am when I compare myself to friends & acquaintances	3.25	High	
My attitude about myself is probably not as positive as most people feel about themselves	2.99	Moderate	
In general, I feel confident and positive about myself	3.56	High	
Mean	**3.18**	**High**	**1st**
Grand Mean	**2.76**	**Moderate**	

Source: Field Survey Data, 2024; Note: ≤ 2.49 = Low Psychological wellbeing status; 2.50 – 2.99 = Moderate Psychological wellbeing status and ≥ 3.00 = High Psychological wellbeing status

Economic Well-being of Rural Households

Entries in Table 2c show that the variables under the assets/income came first on the ranking with a high mean score of 3.06. This was closely followed by the moderate mean score from the variables under security (x̄=2.72), and those under information/knowledge flow came 3rd with a low mean score of 2.48. The grand mean score was low (x̄=2.33), indicating that the economic wellbeing status of the rural households that utilize the improved cocoa production technologies rated low. Similarly, the total grand mean of the general wellbeing status of the rural households in the study area was not high, though moderate (x̄=2.58).

Table 2c: Mean Responses of the Statuses of Economic Wellbeing Rural Households in the study area

ECONOMIC WELLBEING VARIABLES	$\bar{x}$	Status	Rank
Housing/housing utility			
I always have problem of paying for house rent	1.68	Low	
I always have problem of paying utility bills	1.76	Low	
I always have problem with supply of drinking water	2.73	Moderate	
It takes me time to get to nearest supply of drinking water	2.56	Moderate	
Difficulty getting means of transportation to supply of water	2.37	Low	
I own the house I live in now	3.05	High	
Mean	**2.36**	**Low**	**4th**
Health			
I have problems paying for health care services always	1.78	Low	
It takes me time to get to the nearest health clinic	1.81	Low	
Difficulty getting means of transportation to nearest health clinic	1.87	Low	
Mean	**1.82**	**Low**	**6th**
Nutrition			
I have problems most times satisfying my food needs	2.26	Low	
It takes me time to get to nearest food market	2.05	Low	
I find it hard getting a means of transportation to nearest food market	1.85	Low	
Mean	**2.05**	**Low**	**5th**
Education			
I always have the problem of paying my wards school fees	1.50	Low	
It takes time me to get to the nearest primary school	1.83	Low	
It takes time to get to the nearest secondary school	1.92	Low	
There's difficulty getting means of transportation to nearest Pri. Sch	1.87	Low	
There's difficulty getting means of transportation to nearest Sec. Sch	1.95	Low	
Mean	**1.81**	**Low**	**7th**
Assets/income			
I own bigger area of land now compared to previous years	2.89	Moderate	
I cultivated bigger area of land compared to previous years	2.99	Moderate	
There's a better economic situation of my household compared to previous year	2.92	Moderate	
There's an increase in the availability of agricultural inputs compared to the previous years	3.18	High	
Buyers of cocoa produce has increased more than previous years	3.33	High	
Access to credit facilities has improved compared to previous years	3.05	High	
Mean	**3.06**	**High**	**1st**
Security			
Security situation of my household has improved compared to previous years	3.11	High	
The security Situation of my community has improved compared to previous years	2.33	Low	
Mean	**2.72**	**Moderate**	**2nd**
Information /knowledge flow			
Availability of extension services has improved more than the previous years	2.66	Moderate	
It takes me little time to get to the nearest public transport	2.91	Moderate	
It takes me little time to get to the nearest all season road	2.62	Moderate	
I find it difficult getting means of transportation to public road	2.09	Low	
It is difficult for me to find means of transportation to all season road	2.13	Low	
Mean	**2.48**	**Low**	**3rd**
Grand Mean	**2.33**	**Low**	

Source: Field Survey Data, 2024

Note: ≤ 2.49 = Low Psychological wellbeing status; 2.50 – 2.99 = Moderate Psychological wellbeing status and ≥ 3.00 = High Psychological wellbeing status.

Therefore, **the total grand mean of the general wellbeing status of the rural households in Cross River** is calculated thus: Social wellbeing mean ($\bar{x}$= 2.65) + Psychological wellbeing ($\bar{x}$= 2.76) + Economic wellbeing ($\bar{x}$=2.33) = 7.74/3 = **2.58**.

This implied that the general wellbeing status of the members of the rural households in the study area is not high but moderate. This could be attributed to inadequate support and unfavorable government policies on cocoa production and marketing in the study area.

Perceived Effect of Improved Cocoa Production Technologies' Utilization on the Wellbeing of Rural Households

The results in Table 3 show that the variable on 'the control of black pod disease with fungicides has a very good effect on the pests' had a positive perception with the highest mean score of 3.60. Then followed by 'fermentation and drying methods help in bean preservation and longer storage', with a mean score of 3.55 while the variable on 'fertilizer application increased the growth rate of the cocoa seedlings' had a mean score of 3.50, coming 3rd on the ranking table. This finding agreed with that of Nwokocha (2022), that farmers' perceptions of technologies provide better understanding of their technology acceptance since they are the ones that use them and probably perceive the technologies differently from researchers and extension agents.

The grand mean ($\bar{x}$ = 3.31) indicates that there is high positive perception by the rural households on the effect of utilization of improved cocoa production technologies on their wellbeing. Sabillion *et al.* (2022) agreed that measuring perceptions is as reliable as measuring observable indicators.

Table 3: Distribution of rural households based on the perceived effect of improved Cocoa Production technologies' utilization on the wellbeing of rural households

Perceived effect Variables	$\bar{x}$	Rank	Remarks
The Improved Seedlings have higher yields that the local breeds	2.74	10th	PPE
Weed control (cultural maintenance) is effective in weed control	3.49	4th	PPE
Control of black pod disease with fungicides has a very good effect	3.60	1st	PPE
Fertilizer application increased the growth rate of the cocoa seedlings	3.50	3rd	PPE
Control of capsids with insecticides has a very good result	2.88	9th	PPE
Weed control with herbicides is very much easier to control weeds	3.08	8th	PPE
Fermentation and drying methods help in bean preservation and longer storage	3.55	2nd	PPE
Complete farm and phased farm replanting are very effective	3.48	5th	PPE
Coupon regeneration helps in reestablishing cocoa farms	3.14	6th	PPE
Coppicing and grafting grants faster growth rate	3.09	7th	PPE
Grand Mean	**3.31**	**PPE**	

Source: Field Survey Data, 2024

Note: less than 2.50 = Negative Perceived effect (NPE); 2.50 and above = Positive perceived effect (PPE); A (Always), S (Sometimes), R (Rarely), N (Never)

Test of Hypothesis

Table 4 is a result of the null hypothesis that the Level of utilization of improved cocoa technologies does not have a significant effect on the well-being of the rural households in Cross River State. At $p \geq 0.05$, the simple linear regression result gave an F-ratio (1.972), which was significant at 10%, and an R-squared value of 0.016.

However, a t-value of 1.368, which was not significant, implies that there is no significant effect of the improved cocoa production technologies utilized by the rural households on their wellbeing status in the study area. This could be related to the constraints and challenges faced by the households in utilizing the technologies, such as the high cost of the production technologies. This collaborates the findings of Abdul-Majid, Zahari, Othman and Nadzri (2024) that there is strong evidence of a positive relationship between improved technologies' utilization and well-being when sustained users earn higher income and, consequently, a better standard of living. Furthermore, the authors opined that agricultural technology could have a mixed effect on farmers' well-being, depending on the type of technology adopted and the compatibility of farmers with technology in their agricultural practices. For a technology to be utilized by farmers, it must be affordable. Affordability does not end at an initial cost of the technology. It also includes repairs and maintenance costs, availability of personnel to operate or manage the technology and the impact of the technology either on the environment or the immediate user.

Therefore, we accept the null hypothesis that there is no significant relationship between the wellbeing status of the farmers and the level of utilization of improved cocoa production technologies in the State.

Table 4: Simple linear regression analysis of the Effect of Level of Utilization of Improved Cocoa Production Technologies on the Wellbeing Status of the Rural Households in the study area

Parameter	
Constant	**2.949** **(9.331) ****
Use of Cocoa production technologies	0.167 (1.368) ^{ns}
R-Square	0.016
R-Square adjusted	0.007
F-ratio	1.972*

Source: Computed from field Survey, 2024

Conclusion and Recommendations

The study concludes that there is no positive effect of improved cocoa production technologies utilized by the rural households on their wellbeing in the study area and therefore recommends that the Government of Cross River State should step up its various interventions to cocoa farmers in their state in terms of incentives and subsidies

on farm inputs such as improved seedlings and agrochemicals; trainings; favourable policies; farm insurance; access to loans and grants, etc. in order to reduce production cost and increase their income with higher returns on investment. This will boost the general wellbeing status of rural households in the study area.

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