



Cocoa Farmers' Participation in Farmers Business Schools Activities in Osun State, Nigeria

<https://dx.doi.org/10.4314/jae.v27i3.7>

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Submitted: 26th May 2023

First Request for Revision: 23rd, June 2023

Revisions: 27th June, 2nd July 2023.

Accepted: 3rd July 2023

Published: 23rd July 2023

Cite as: Badiru, I. O., Ladigbolu, T. A. and Arogundade, J. O. (2023). Cocoa Farmers' Participation in Farmers Business Schools Activities in Osun State, Nigeria. *Journal of Agricultural Extension* 27(3) 61-72,

Keywords: Farmer Business School, intervention programmes, farm business participation, cocoa farmers

Conflict of interest: The authors declare no potential conflict of interest.

Acknowledgement: Authors would like to acknowledge the respondents for their cooperation during data collection.

Authors' contributions:

BIO: (40%): Conceptualization; Data curation; Supervision; Validation; Visualization

LTA (30%): Conceptualization; Methodology; Resources; Software; Formal analysis; Software; Methodology; Writing - review & editing.

AOJ (30%): Conceptualization; Investigation; Data curation; Visualization; Writing - original draft

Abstract

This study assessed cocoa farmers' participation in FBS activities in Osun State, Nigeria. A three-stage sampling procedure was used to select 131 cocoa farmers. Information on respondents' participation, knowledge, satisfaction, benefits and constraints to participating in FBS activities were collected through the interview schedule. Data gathered were analysed using mean, standard deviation, Weighted Score (WS) and Pearson Product Moment Correlation (PPMC) at $\alpha 0.05$. Cocoa farmers' farm size and years of farming experience were 3.82 ± 5.71 and 21.50 ± 13.61 respectively. They participated in classroom work and discussion ($WS=156.5$), benefited from improved knowledge of farm management and farm record ($\bar{x} = 1.00$) and were satisfied with the training schedule fixing ($WS=150.3$). However, they were constrained by inadequate funds to use the knowledge acquired ($WS=139.8$). Respondents

had a high level of participation (51.9%), knowledge (55.0%) and satisfaction (50.4%) about FBS activities. Significant relationships existed among respondents' participation ($r=0.041$), satisfaction ($r=0.321$) and knowledge about FBS activities. Farmers' participation in the FBS improved their knowledge of farm business management hence, should be continued to impact their livelihoods.

Introduction

Cocoa, *Theobroma cacao*, is one of Nigeria's most crucial cash crops and Nigeria is ranked Africa's fourth, trailing Cameroon, Ghana and Côte d'Ivoire as the largest cocoa producer but the nation is ranked fifth in the world (Shahbandeh, 2021 and Afolayan, 2020). It is indigenous to South and Central America's tropical areas (Tenkap and Balogun, 2020; Afolayan, 2020).

Cocoa is an important cash crop with huge potential to boost the Nigerian economy, help in providing employment for youths, raw materials for industries and income to farmers. It has also made a huge contribution to the export and foreign exchange of the country. Despite these huge potentials in stimulating agricultural growth in Nigeria, it is surprising and unfortunate that there have been reports of low production from cocoa farms as well as the decline in its economic importance in the country {Adetarami, Alfred, Fasina, Soetan, and Johnson, (2020); Awoyemi, and Aderinoye-Abdulwahab (2019); Beckett, (2018); Shahbandeh, 2021; Kozicka, Tacconi, Horna and Gotor, (2018); International Cocoa Organization's (ICCO), (2021)} over the years. Such a decline in the production of a very important export crop calls for concern because it threatens the sustainability and potential of the agricultural sector.

According to authorities (Adetarami, Olagunju, Oyebamiji, Odeyemi and Johnson, 2022; Kozicka, et al., 2018; Shahbandeh, 2021; Beckett, 2018), the main issues that cocoa industries confront are inconsistency in production, poor access to finance and marketing information. Others are non-adoption of improved seedlings, low yield arising from ageing trees, infestation of pests and diseases, high cost of acquiring equipment, increase in production sustainability when considering modified varieties (GMOs), cost of crop management, organizing chain cost of quality control in meeting the demands of many customers, marketing and marketing structure as well as non-adoption of research recommendations.

ICCO, (2021) reiterated that after the decline of annual cocoa output in Nigeria, various strategies were established to revive the cocoa production. Some of these strategies include organized cocoa farmers groups, the Cocoa Research Institute (CRIN), the International Institute of Tropical Agriculture (IITA), the National Cocoa Development Committee (NCDC), the Cocoa Farmers Association of Nigeria, (an umbrella organization of private actors in the cocoa industry) and the NGOs with a primary focus on input distribution and agrochemical procurement as well as the Farmer Business School (FBS). All these strategically structured initiatives, interventions and programmes were organized to combat issues confronting cocoa farmers and cocoa production in the country and to promote cocoa production in Nigeria, (Thomas, Oladijide and Olutayo, (2022) and Afolayan, 2020).

Meanwhile, FBS was established in the Central West Africa by the Deutsche Gesellschaft Fur Internationale Zusammenarbeit (GIZ) in 2010 with partners and support from the World Cocoa Foundation as well as the Bill and Melinda Gates Foundation, (Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH, 2019; Bannor, Oppong-Kyeremeh, Amfo, Hope and Kyire, 2022). The FBS uses a

large-scale business skills training approach to strengthen the entrepreneurship skills of smallholder cocoa farmers. It is an organized seasonal programme established for farmers to work together in small groups, learn from each other from their farms and thereafter return to the class to share and compare the results. FBS is based on economic analysis and an adult discovery learning approach, where smallholder farmers learn and draw experiences from each other on crop profitability and production techniques so as to make investment decisions resulting in increased yields and income. (Adetarami, *et al*, 2022; Adetarami, *et al*, (2020). The school provides the farmers with specially designed training materials and hand manuals prepared for facilitators (state extension agents) and farmers. The manuals provide step-by-step guidelines that take facilitators and farmers through the basics of farm business management concepts, production patterns, tools and practices as well as a series of practical applications (GIZ, 2019).

It is expected that with this robust approach adopted by the FBS, beneficiaries should be more knowledgeable about the enterprise, so as to boost cocoa production, maximize profits have improved livelihood status in the participating states. This is especially because the overall aim of FBS was to increase cocoa production in the country. Although, authors like Adetarami, *et al*, (2022) and Adetarami, *et al*, (2020) studied the impact of the farmer business school approach on smallholder cocoa farmers as well as the profitability and utilization of FBS extension approach on smallholder cocoa farmers in Nigeria none of them considered the knowledge, participation benefits and satisfaction derived by the farmers from the school.

It is, therefore, necessary to investigate if this organizational goal or objective has been actualized since the inception of the school viz a viz farmers' participation, knowledge, benefits and satisfaction derived in the school programmes. Thus, it is against this backdrop that this study probes farmers' participation and knowledge about the FBS in Osun State. The following objectives guided the study:

1. describe the enterprise characteristics of cocoa farmers in FBS.
2. examine the level of participation of cocoa farmers in FBS.
3. assess the level of knowledge of participant cocoa farmers in farm business management.
4. ascertain the level of satisfaction of cocoa farmers in FBS activities.
5. determine the benefits derived by cocoa farmers from participating in FBS activities.
6. identify the constraints encountered by cocoa farmers while participating in FBS activities.

Hypotheses

H₀1: There is no significant relationship between participation in FBS and knowledge of business management.

H₀2: There is no significant relationship between satisfaction derived from participating in FBS and knowledge of business management.

Methodology

This study was carried out in Osun State, in south West Nigeria. The State, according to the National Bureau of Statistics projection of 2016 has a population of 4,705,589 people, (NBS, 2017). Osun state is situated in the tropical rainforest zone and lies between latitude 70 30'0' N and longitude 40 30'0'E, as well as an altitude of 246

meters above sea level. The State covers an area of approximately 14, 875 square kilometres of land mass. It is bounded in the west by Oyo State, in the east by Ondo and Ekiti States while in the north by Kwara State and South by Ogun State.

The population of this study comprises all cocoa farmers that are engaged in the FBS training in Osun State. A Multistage sampling procedure was used to select respondents for this study. At first, one-third of 12 Local Government Areas (LGAs) in the State were purposively selected using a purposive sampling technique. This amounts to four LGAs namely Ayedaade, Aiyedire, Obokun and Oriade. These LGAs were selected due to the high concentration of cocoa farmers as well as FBS trainees in the area. In the second stage, 25% of the communities in each of the selected LGAs were randomly selected using a random sampling technique. There were 24 communities in all, five communities from Ayedaade, one from Aiyedire, eight from Obokun and Oriade LGAs respectively. Finally, using a list of registered cocoa farmers obtained from Sustainable Smallholder Agri-Business (SSAB), 20% of the FBS cocoa farmer participants were randomly selected using a simple random sampling technique from each of the selected communities in the study area. In all, a total of one hundred and thirty-one cocoa farmers were selected.

Respondents' level of participation in the FBS activities was measured first by assessing their participation in a list of 12 school activities provided. They were to indicate their participation by picking one response option from three options "high", "moderate" and "no". A score of 2 was assigned to "high", 1 to "moderate" and 1 to "no" option. The maximum score was 24 and the minimum was 0. Some of the school activities provided were classroom work and discussion, the nomination of a group focal person, training schedule fixing as well as the establishment of ground rules for group information among other activities. Then, the response options were summed up to generate the weighted score for the activities which was eventually used in reporting these results. Thereafter, the participation index and mean score were generated in order to determine the level of participation, using mean as a benchmark, the index was categorised into a high level of participation and low level of participation. Those respondents' scores that fall below the mean value were categorized as low while those scores that fall within the mean value and above were categorized as high levels of participation.

In a similar vein, respondents' level of knowledge of business management was measured by initially assessing their knowledge about enterprise management. This was done by giving them a list of 15 test items and they were asked to provide the correct answers. The test items were weaving around cocoa enterprise and its management with the appropriate response options; some were practical questions while others were objectives. Then, a score of 1 was assigned to all correct response options and 0 to all incorrect options. So the maximum available score was 15 and the minimum score was zero (0). Some of the test items were; what are the steps that determine the quality of the cocoa farm business?; how many seedlings will you use to cultivate one acre of land?; why will a buyer make a discount from 400kg of fresh cocoa beans that gives 112kg of dried cocoa beans that were fermented and properly dried?

Then, the level of knowledge of business management was determined by generating a knowledge index and mean score. The mean score was used to categorise the index into a high level of knowledge and low level of knowledge. The respondents' scores

that fall below the mean value were categorized as low while those scores that fall within the mean value and above were categorized as high level of knowledge.

Other objectives such as the level of satisfaction, benefits derived and constraints encountered while participating in the FBS activities and enterprise were all measured adequately using the appropriate response options.

Results and Discussion

Enterprise Characteristics of Participants

Table 1 shows that the mean annual income, farm size and years of farm experience of the respondents were 950,305.34 Nigeria Naira (NGN), 3.82 acres, and 21.5 years respectively. It also reveals that the majority (77.9%) of the respondents used family and hired labours. The Table also observes that the majority (64.8%) of the farmers sell cocoa at a combination of venues (the farm gate/ rural market, urban market and to off-takers) while 49.6% sell cocoa to the retailers.

This implies that the Farmer Business School participants are average-holder farmers, who are well experienced in the farming business. They make relatively good fortune from their farming enterprise and this could be attributed to the fact that they sell their produce in large quantities to retail buyers or because of their participation in FBS. It could also be probably because they are using both family and hired labour on their farm to reduce the cost of production, Thomas et al., (2022).

Table 1: Enterprise characteristics

Variable	Percentage	Mean
Farm size (acres)		3.82±5.71
Annual income (₦)		950,305.34±623,518.48
Type of labour		
Family labour	6.9	
Hired labour	15.3	
Family and hired labour	77.9	
Years of farming experience		21.50±13.61
Sales of cocoa		
Farm gate/rural market	14.5	
Urban market	11.5	
Offtakers	9.2	
Farm gate/rural market, urban market and oftakers	64.8	
Buyers		
Wholesalers	8.4	
Retailers	49.6	
Both retailers and wholesalers	42.0	

Source: Field Survey 2018

Level of Participation in Farmers Business School Activities

Table 2 shows that the majority of the respondents ranked classroom work and discussion school activity highest with a weighted score of 156.5 among other activities participated in school. This activity was immediately followed by the

nomination of a group focal person (WS=147.4), training schedule fixing (WS=132.8), the establishment of ground rules (WS=119.8), group information (WS=117.5) and establishment of school or group project (WS=118.4).

The Table also shows that more than half (51.9%) of the respondents had a high level of participation in school activities.

The implication is that farmers' high participation in various farmer business school activities would translate to increased knowledge and a high level of information sharing about cocoa production. This is in agreement with the finding of Bannor, et al., (2022) that many cocoa farmers participated in FBS activities. The farmers specifically participated in classroom work and discussion, the nomination of group focal person, training schedule fixing, the establishment of ground rules, group information and establishment of school or group projects.

Table 2: Level of participation in farmers business school activities

FBS activities	Weighted score
Classroom work and discussion	156.5
Nomination of group focal person	147.4
Training schedule fixing	132.8
Establishment of ground rules	119.8
Group information	117.5
Establishment of school or group project	118.4
Gathering of inputs for demonstration	116.7
Formalizing FBS trained group to becoming farmers' cooperative group	106.9
Ground work	104.6
Selection of cooperative group executives	119.8
Registration of the cooperative group under the state government	75.6
Linkage of the group with beneficiaries intervention	22.9
Participation level {25.39±5.23; Min. = 14; Max. = 36}	Percentage
Low (≤ 25.38)	48.1
High (≥ 25.39)	51.9

Source: Field Survey 2018

Knowledge of Business Management

Table 3 reveals that more than half (55.0%) of the participants have a high level of knowledge about farm business management. According to Bannor, et al., (2022) knowledge and skills cocoa farmers acquired from FBS include new farming methods, creativity in solving farming problems, the ability to meet set targets, record keeping, and managerial skills. Therefore, farmers' participation was motivated by acquiring new knowledge to their boost production.

Table 3: Knowledge of business management

Knowledge level {11.37±1.81; Min. = 5; Max. = 14 }	Percentage
Low (≤ 11.36)	45.0
High (≥ 11.37)	55.0

Source: Field Survey 2018

Level of Satisfaction in FBS Activities

Table 4 shows that training schedule fixing (WS=150.3), group information (WS=148.8), nomination of group focal person (WS=143.5), linkage of the group with beneficiaries intervention (WS=143.5), registration of the cooperative group under the state government (WS=139.7) as well as classroom work and discussion (WS=135) were the farmers business school activities that the respondents were satisfied with. The Table also observes that 50.4% of the respondents had high level of satisfaction.

It can be inferred that, participants, due to their high level of participation in school activities and knowledge received on business management are well satisfied with the FBS activities. It also implies that the cocoa farmers are highly satisfied with those school activities that they mostly participated in especially, nomination of group focal persons as well as classroom work and discussion.

Table 4: Level of satisfaction in FBS activities

FBS activities	Weighted score
Training schedule fixing	150.3
Group information	148.8
Nomination of group focal person	143.5
Linkage of the group with beneficiaries intervention	143.5
Registration of the cooperative group under the state government	139.7
Classroom work and discussion	135.1
Establishment of school or group project	125.2
Establishment of ground rules	124.4
Formalizing FBS-trained groups to become farmers' cooperative group	116
Gathering of inputs for demonstration	109.1
Ground work	100.8
Selection of cooperative group executives	86.3
Satisfaction level {15.23±3.13; Min. = 7; Max. = 23}	Percentage
Low (≤ 15.23)	49.6
High (≥ 15.23)	50.4

Source: Field Survey 2018

Benefits Derived from Participating in the FBS Activities

Table 5 reveals that respondents derived benefits from improved knowledge on farm management and farm record ($\bar{x} = 1.00$), enhanced entrepreneur and management skills ($\bar{x} = 0.99$), provision of training materials and handbooks for subsequent use ($\bar{x} = 0.99$), enlightenment on how to evaluate farm business performance ($\bar{x} = 0.99$), increased profitability ($\bar{x} = 0.98$), and implementation of individual farm business ($\bar{x} = 0.98$) as well as investment in replanting cocoa ($\bar{x} = 0.98$). This shows that cocoa farmers benefited immensely on how to establish, monitor, evaluate and generally manage their farm enterprise to maximize profits.

Table 5: Benefits derived from participating in Farmers Business School activities

Benefits items	Mean	SD
Improved knowledge of farm management and farm record	1.00	0.49
Enhanced entrepreneur and management skills	0.99	0.45
Provision of training materials and handbooks for subsequent use	0.99	0.44
Enlightenment on how to evaluate farm business performance (profit & loss calculation)	0.99	0.42
Increased profitability	0.98	0.41
Implementation of individual farm business	0.98	0.40
Investment in replanting cocoa	0.98	0.42
Exposure to financial services	0.72	0.30
Exposure to market opportunities	0.43	0.01

Source: Field Survey 2018

Constraints Encountered while Participating in Farmers Business School Activities

Table 6 reveals that most of the constraints encountered while participating in the school activities by the respondents were mild except for inadequate funds to implement the knowledge acquired in school (WS=139.8), FBS trainees are not linked with beneficial intervention programmes (WS=126.7) and inadequate land for experimenting learnt techniques (WS=45.1) that were severe challenges. That is, the mild constraints did not really stop the respondents from participating in school activities, gaining knowledge about business management or deriving adequate benefits and satisfaction as a result of their participation. These above constraints are not too different from other constraints faced by farmers while participating in other farmers' programmes of this nature some of which are limited land to establish new cocoa farms, poorly developed marketing systems, scarcity of labour, poor technological, infrastructural, financial and extension supports, Thomas et al., (2022).

Table 6: Constraints encountered while participating in Farmers Business School activities

Constraints encountered	Weighted score
Inadequate fund to implement knowledge acquired in school	139.8
FBS trainees are not linked with beneficial intervention programmes	126.7
Inadequate land for experimenting learnt techniques	45.1
FBS activities are time overwhelming	26.9
Inability to pay beneficiary contribution	18.3
Difficulty to attending weekly school routine	16.1
Poor quality of inputs for demonstration	9.2
Unavailability of learning materials	3.8
Unhealthy competition environment between cocoa farmers and trainees in class	1.5

Source: Field Survey 2018

Existing Relationships among Participation, Satisfaction and Knowledge Acquired from Farmer Business School

Table 7 shows that there were significant relationships among respondents' participation in farmer business school activities ($r=0.041$), satisfaction with farmer business school activities ($r=0.321$) and their knowledge about business management.

This infers that farmers' participation in FBS, the satisfaction derived from their participation and the knowledge acquired from the school are interrelated as one affects the others. It is evident that they will continue to acquire useful knowledge about their enterprise if they participate as well as derive satisfaction from the FBS. This is in line with Bannor et al., (2022) they inferred that farmers' participation in FBS has positive implications on cocoa farmers' production and productivity.

Table 7: Relationships among participation, satisfaction and knowledge acquired from Farmer Business School

Variable	r-value
Participation *knowledge	0.041*
Satisfaction *knowledge	0.321*

Conclusion and Recommendations

Farmers that participated in the FBS are average farm holders, well experienced in the farming business and make a relatively good fortune from their farming enterprise which is translated to improved livelihood. Cocoa farmers' participation was motivated by benefits derived as well as the new knowledge about business management acquired from FBS and they are generally satisfied with farmers' business school activities. Cocoa farmers were not linked with beneficial intervention programmes on

completion of their training in FBS, nor were provided with adequate funds and land to implement the knowledge acquired in school.

The FBS programme should be continued and extended to other cocoa-producing states in the country. More cocoa farmers should also be encouraged to participate in the programme since it has a tendency to increase knowledge of farm business management and boost farmers' benefits. That is, as long as the farmers participated in FBS, they will continue to acquire useful knowledge to boost and improve their enterprises.

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