



(RESEARCH ARTICLE)



Assessing the performance and activities of farmers' cooperative groups on cassava production in Ukwani Local Government Area of Delta State, Nigeria

OYEM A ¹, OWIGHO O ^{1,*}, TIBI KN ² and IKENGA VU ³

¹ Department of Agricultural Economics, Delta State University of Science and Technology, Ozoro, Delta State, Nigeria.

² Department of Agricultural Economics and Agribusiness Management, Dennis Osadebey University Asaba Anwai, Delta State Nigeria.

³ Department of Agricultural Economics and Agribusiness Management, Delta State University, Abraka, Delta State, Nigeria.

GSC Advanced Research and Reviews, 2024, 21(02), 456–463

Publication history: Received on 04 October 2024; revised on 22 November 2024; accepted on 24 November 2024

Article DOI: <https://doi.org/10.30574/gscarr.2024.21.2.0442>

Abstract

The study examined the performance and activities of farmer's cooperative groups on cassava production in Ukwani Local Government Area of Delta State, Nigeria. Specifically, it described the socio-economic characteristics of the farmers, determine the net farm income of the farmers in cooperative society and those that do not belong to cooperative groups, and identify the factors that affect the progress of cooperative society in the study. Multi stage sampling techniques was used in selecting 100 farmers. Descriptive statistics and budgetary techniques were used for data analysis. The performance and the activities of the cooperative society include input supply, processing, marketing, supplying of credit facilities and extension services. Farmers that belong to cooperative group had a net farm income of approximately N74,737.37 per hectares while non- members were N64,017.50 per hectares. The constraints that affected the performance and the activities of cooperative society include lack of farmer's participation, loan defaulting, lack of credit facilities and insufficient funds. The study concludes that cassava farming and its activity in the study area have a promising future since the farmers are within the active age range and the enterprise is profitable. It is recommended among others that member of the farmers of cooperative group should be encourage to pay up their dues so that the group would have fund to operate while enlighten programmes should be organize for farmers that do not belong to cooperative group to enable them know the benefits and relevance of being a member of a cooperative group.

Keywords: Accessing; Cassava production; Farmer's cooperative group; Net farm income and farm output

1. Introduction

International cooperative alliance (ICA 2010) define cooperative as an autonomous association of person unified voluntary to meet their common economic socio cultural need through a jointly owned and democratically controlled enterprises. It is a business voluntary owned and controlled by it member patrons and present for them and by them on a nonprofit basis. Cooperative have long been recognized to play an important role in the society that translates into improvement of living condition of their member particularly the low income earning career of the population, the rural people and the urban poor, cooperative aggregate people resources and capital into economics units. Been voluntary, democratic and self-control business organization, cooperative offers the institutional frame work through which local communities gain control over the productive activities from in which they derive their lively wood (Ahrens et al., 2020). Different author defines cooperative in different ways and meanings. For example, Kamilaris et al., (2019) defines a cooperative as a private company that is owned and managed by the consumers of its goods. both goods and services. While cooperatives come in a variety of forms and membership sizes, they are always designed to help members achieve their own goals and are self-supporting in nature. Ashraf, et.al., (2020b) revealed that Agriculture cooperative is rural

* Corresponding author: OWIGHO O

based organization, they play a key role in the commercialization of smallholders' produce, the opening up of new productive assets, and the reduction of market barriers brought about by slow economic growth.

According to Dodds, et.al. (2016), Agricultural cooperatives are effective tools that contribute significantly to local development in rural areas. It makes it possible for its members to easily sell their goods and obtain farming equipment. Similarly, ICA (2010) pointed out that cooperatives have the benefit of helping the underprivileged find economic possibilities, strengthening the disadvantaged group by standing up for their rights, and giving the poor security by enabling them to turn individual risk into communal risk. Altieri, et.al. (2015). viewed cooperative as an importance tool of improving the living condition of farmer. Cooperatives are particularly viewed as important instruments for the generation of jobs and the mobilization of resources for income generation, according to Zakeri (2022), while Garg, et.al (2018) found that cooperatives employed more than 100 million men and women globally. Cooperatives in Nigeria provide farmers with access to jobs, inputs, and locally required services. Furthermore, cooperatives allow farmers to create groups in which they can collaborate to offer services that will increase members' productivity.

According Nations, (2021). Cooperative services serve as avenue for input distribution though their nationwide structure they have developed strong and reliability arrangement for the distribution of foods, crops, credits, seeds and seedling. In recent years, one of the most crucial prerequisites for the efficient mobilization of production resources and the acceleration of farmers' advancement has emerged: the formation of cassava cooperatives. Muñoz, (2021) emphasized, that one of the most effective vehicles for organizing organic cassava farming adoption production, therefore is cooperative. According to Hilty, et.al (2020), Cooperative activities provide an explanation for the most effective ways in which small-scale farmers can participate in economic development, democratic produce production, and business management.

Cooperative society came into existence when people who decided to work together and pull their resources together for a purpose based on mutual benefits apart these, a cooperative is an association of people or small companies with similar products service of interest formed to obtain greater bargaining power and other economic scale A major contract of agricultural development in Nigeria to obtain credit, loan from the formal institution such as bankers for farm operation and this has resulted into the use of cooperative services to get loans by the farmers. Reluctantly, the cooperative option came into focus as a way to effectively, mobilize farmers into groups and pool resources so as to become more effective. Agricultural production cooperative groups have been noted to play vital note, agricultural production, especially in developed countries, Nigeria inclusive, where their contribution is paramount studies have shown that cooperative farmers contribute significantly in agricultural activities (Nations 2018). Ashraf, et.al (2021c) and Owigho and Eromedoghene (2021) stated that to boost cassava production in the rural areas, essential farm inputs such as capital, cassava stem and land are very essential to cassava cultivation, particularly in large scale but hardly with these farm inputs be sufficiently available to farmers to enhance their farming activities their often times, these farm tools are shared to farmers through cooperative groups. According to these authors, even these basic farm tools are available accessing them is always difficult for farmers who do not belong to cooperative group. SDPRRI (2021), stress that non provision of availability of credit facilities to farmers to enhance their farming activities adversely affects their level of production particularly in cassava cultivation. These authors though agreed that with seedling cassava stems adequate land size is good enough with local tools being acquired by these farmers to enhance their cassava production thereby solving the problem of food instability in Nigeria and Africa in General. No doubt that Agricultural cooperative still remains a viable tool for solving food crisis in the economy particularly in cassava cultivation. These authors though agreed that seedling, cassava stems, adequate land size, and local tools being acquired by these farmers to enhance their cassava production thereby solving the problem of food instability in Nigeria and Africa in general. No doubt, agricultural cooperatives are still a useful instrument for addressing the nation's food issue, especially when it comes to cassava farming. Unfortunately, the majority of cassava farmers continue to cultivate their crops for smaller-scale output.

Objective of the study

The overall objective of this study was accessing the performance and activities of farmer's cooperatives groups on cassava production in Ukwani Local Government Area of Delta State, Nigeria. The specific objectives are to;

- describe the socio-economic characteristics of farmers in the study area
- examine the activities of farmers that belong to cooperative groups in the study area
- ascertain the farmers' farm net income level on cassava production among the society groups
- identify the factors that affect the progress of the cooperative society in the study area

2. Material and methods

2.1. Area of study

The was carried out in Ukwani Local Government Area of Delta State is situated at the southern part of Nigeria, it lies approximately between longitude 50 E to 60 - 45E of the Greenwich meridian, and latitude 50 N and 60-30N of the equator. It has a total land area of 17440km²; about one third of this is swampy and waterlogged Delta state Diary 2003. Ukwani Local Government Area has it headquarter at Utagba-ogbe that is kwale and one of the major oil producing areas of the state. According to the national population census of 2006 Ukwani has a population strength of about 149,325 people, male 79018, female 70307 and a land mass of 1,426 square kilometers. The area comprises of several villages/towns and ten major communities

2.2. Method of data collection

Data for this study were collected from primary and secondary source. Primary data were collected using a well structure questionnaire which was administrated to the two groups of cassava farmers and by oral interviews. Information on the socio-economic characteristics of the farmers such as age, gender, educational qualification, marital states, years of farming experience household size and farm size were collected 100 additional data were collected on output level of farmers as variable and as well as constants to the progress of the farmers' cooperative society. Secondary data were accessed from text book, journals, conference proceedings, workshop papers, seminar papers, magazine and bulletins.

2.3. Sampling

A multi stage sampling technique was used to select the sample for the study. At the first stage ten communities were purposively selected from the study area due to their participation. This includes Obiaruku, Umutu, Umuaja, Obiomba, Obeti, Ama, Ezeonu, Ebede, Akoku, and Umukwata. The secondary stage entailed the selection of ten farmers each from the communities which will be five (5) farmers that belong to farmer's cooperative groups and fifty (5) that are not members of the cooperative groups. This gave fifty (50) farmers that belong to farmer's cooperative groups and fifty (50) that do not belong to farmer's cooperative group. This sample size of 100 respondents for the study.

2.4. Data analysis

Data were achieved using simple descriptive statistics such as means, frequency distribution and percentages, while net farm income was accomplished using the gross margin equation which is expressed as

- $GM = TR - TVC$
- Where;
- GM = Gross Margin
- TR = Total Revenue
- TVC = Total Variable Cost
- Net profit margin analysis is expressed as
- $NPM = TR (TFC + TVC)$
- Where
- NPM = Net Profit Margin
- TR = Total Revenue
- TFC = Total Fixed Cost
- TVC = Total Variable Cost

3. Results and discussion

Socio-economic characteristics of respondent

3.1. Age of respondents

The results showed that majority of the respondents were within the age 41 to 50 years (48.0%), 31 to 40 years (28.0%), 21 to 30 years (14.0%), 61 to 70 years (3.0%) and 71 years and above (1.0%), while the mean age of the respondents was found to be 40 to 41 years This shows that the farmers are still in the productive age. This implies a future in the enterprise having young farmers is also advantageous in the activities of cooperative group because the farmer will aspire to compare their present condition.

3.2. Gender of the respondents

The result shows that majority (49.0%) of the respondents were named while 23.0% of the respondent were single and only few (28.0%) were widows. The result was in conformity with Owigho et.al (2023) who reported that vast majority of the rural farmers in developing nation were married thus their household will help in some farm activities WARDA West Africa Development Association 2003 also postulated that being married would mean that the respondents were responsible and had sense of reasoning to think of their future on how to improve their farming activities and boost activities as well as how to overcome challenges of their enterprise

3.3. Marital status of the respondents

The result also revealed that majority (49.0%) of the respondents was married while (23.0%) of the respondents were single and only few (28.0%) were widows. The result was in conformity with Banerjee and Jackson (2016) who reported that majority of the farmers in developing nation were married thus their household will help in some farm activities. West African Rice Development Association (WARDA) (2003) also postulated that being married would mean that the respondents were responsible and had sense of reasoning to think of their future on how to improve their farming activities, as well as how to overcome challenges of their enterprises

3.4. Household size of the respondents

The result revealed that majority of the respondent (40.0%) had 4-6 persons, 25% for 7-9 persons, 22.0% for 10 and above, and while 13.0 had family size of 1-3. The average number of persons living and eating from the same pot household size was found to be about 7 people. This implies that the family that the farming household will have enough sources of family labour. This support the assertion of Banerjee and Jackson (2016) and Owigho et.al (2023) that household will help in farm activities. This will also give the farmers chance to cultivate more land and spend less for hiring labour.

3.5. Educational level of the respondents

The result revealed that majority 65 of the respondents has secondary education while 21 and 41 had primary and tertiary education respectively. This shows that majority of the farmers had formal education. This finding implies that famers had acquired certificate in one or two forms of education and can access the benefits of being a member of a cooperative society as educational level is an important factor as agreed with Owigho et.al (2023) who affirmed the impact of education in a wider context, not merely of formal qualifications but also of specialized training assessed by farmers.

3.6. Farm size of the respondents

The average farm size cultivated by the farmers is 3.35 hectares. The findings revealed that as many as 70 of the farmers had farm size of between 1-3 hectares while only 30 had more than 3 hectares, this implies that majority of the cassava farmers were smallholder farmers. The findings is in agreement with Nweze (2012) who postulated that majority of the farmers in developing countries cultivate average of 3.35 hectares of land and this attributed to lack of finance expand.

3.7. Farming experience

The results revealed that most 68 of the respondents who belong to farmers' cooperative has spent at least 1-3 years as members of cooperative, 26 of the respondents had spent 4-6 years while only 6 spent 7-9 years as members cooperatives. The average mean years of respondents' experience in cooperative societies is 2. This implies that the respondents had little experience in the farmers' cooperative societies

3.8. Net farm income of cassava farmers

The results revealed that farmers' cooperative groups have a net farm income of 74,737.57 while those farmers that do not belong to cooperative groups have a net farm income of 64,017.50 more than non-cooperative farmers. These constraints are made easier for farmers that belong to cooperative group.

Table 1 Distribution of respondents according to their socio-economic characteristics

Variable	Frequency	Percentage	Mean
AGE(Years)			
21-30	14	14.0	
31-40	28	28.0	
41-50	48	48.0	41.40
51-60	6	6.0	
61-70	3	3.0	
71 Above	1	1.0	
SEX			
Male	67	67.0	
Female	33	33.0	
MARITAL STATUE			
Married	49	49.0	
Single	23	23.0	
Widow	28	28.0	
HOUSEHOLD SIZE (PERSON)			
1-3	13	13.0	
4-6	40	40.0	7.00
7-9	25	25.0	
10 ABOVE	22	22.0	
EDUCATIONAL LEVEL			
Primary	21	21.0	
Secondary	65	65.0	
Tertiary	14	14.0	
PRIMARY/SECONDARY OCCUPATION**			
Trading	65	43.9	
Civil service	4	2.7	
Bricklaying	16	10.8	
Wood miller	1	0.7	
Carpentry	3	2.0	
Hunter	8	5.4	
Motor cycle rider	7	4.7	
Taxi driver	10	6.8	
Mechanics	4	2.7	
Blacksmith	3	2.0	
Barbing saloon	9	6.1	

No response	18	12.2	
FARM SIZE(HA)			
1-3	70	70.0	
4-6	18	18.0	
7-9	9	9.0	3.35
10 and Above	3	3.0	
ANNUAL INCOME(₦)			
< ₦ 190,000	66	66.0	
>₦ 190,000-N999,000	24	24.0	
>₦ 1,000,000	10	10.0	
MEMBERSHIP EXPERIENCE			
1-3	34	68	
4-6	13	26	
7-9	3	6	2.72
10 ABOVE	0	0	

SOURCE: Field survey, 2024

Table 2 Net farm incomes

	Average number of Hectares	Average quantity of harvested (KG)	TR/HR (N)	Cost of labour (N)HA	Cost of input (N)HA	Other cost (N)HA	TVC (N)HA	TFC (N)HA	GM(N) TR-TVC	NFI GM-TFC
Cooperative Farmers	4.26	10530.96	98503.87	18,945.18	22,721.69	10,245.52	51,912.39	12,860.53	46,591.47	74,737.37
Non-cooperative Farmers	3.25	7,862.65	79,245.24	15,689.87	19,731.78	8,124.92	43,546.57	11,681.23	35,698.67	64,017.50

SOURCE: Field survey, 2024

3.9. Factors that affect the progress of cooperative society in the study area

Some of the constraints to the progress of the farmers’ cooperative society .These constraints actually hindered cooperative improvement in all their activities such as lack of farmers participation (87%), Little or no support from the government NGOs (77.0%)Lack of machinery (70.0%) , Shortage of farm inputs (68.0%), Loan defaulters (63.0%), Lack of credit facilities (62.0%) , insufficient funds by the cooperative (60.0%), irregularity in membership weekly monthly contribution (52.0%) and membership registration problem (48. 0%) This shows that lack of farmers active participation is the greatest problem that affect the progress of the cooperative group, loan defaulting, weekly monthly contribution insufficient funds and lack of government support, shortage of farm inputs and NGOs support are the main factors affecting the progress of the cooperative groups.

Table 3 constraints related to cooperative society

Variable	Members	Non-members	Frequency	Percentage (%)
Registration of members	6	42	48	48.0
Participation of farmers	49	38	87	87.0
Loan defaulting	13	50	63	63.0
Weekly/monthly contribution	2	50	52	52.0
Insufficient funds by the cooperative	10	50	60	60.0
Lack of government/N.G.Os support	27	50	77	77.0
Shortage of farm inputs	18	50	68	68.0
Lack of machinery	22	48	70	70.0
Lack of credit facilities	12	50	62	62.0

SOURCE: Field survey, 2024.

4. Conclusion

The findings presented above showed that both male female were engaged in cassava farming in the study area, cassava farmers were mostly married and had a minimum of primary education, cassava farming in the area has a promising future since the farmers were still within the active age range, both farmers cooperative members engaged in cassava farming and made profit finally farmers that belong to farmer cooperative society in Ukwani local government area of Delta State had higher net farm income than farm that were not members.

Recommendations

Based on the finding, the following recommendations were made;

- The cooperative society should try as much as possible to pay their weekly, monthly dues in order for the cooperative society to have enough funds in its account to run day to day activities of the society.
- Members of the farming communities should be encouraged to organize themselves into several cooperative associations among themselves to help more in further production.
- Government should make fund available for farmer Cooperative societies in the study area.
- Enlighten programmed should be organize by Extension agents for farmers that do not belong to cooperative group to enable them know the benefits and relevance of being a member of a farmers cooperative group.

Compliance with ethical standards

Disclosure of conflict of interest

No conflict of interest to be disclosed.

Statement of informed consent

Informed consent was obtained from all individual participants included in the study.

References

- [1] Altieri, M. A., Nicholls, C. I., Henao, A., and Lana, M. A. (2015). Agroecology and the design of climate change-resilient farming systems. *Agronomy for Sustainable Development*, 35(3), 869 –890. <https://doi.org/10.1007/s13593-015-0285-2>
- [2] Ahrens, T., Ferry, L., and Khalifa, R. (2020). Governmentality and counter-conduct: A field study of accounting amidst concurrent and competing rationales and programmes. *Management Accounting Research*, 48, 100686. <https://doi.org/10.1016/j.mar.2020.100686>

- [3] Ashraf, E., Sarwar, A., Junaid, M., Baig, M. B., Shurjeel, H. K., and Barrick, R. K. (2020b). An Assessment of In-service Training Needs for Agricultural Extension Field Staff in the Scenario of Climate Change using Borich Needs Assessment Model. *Sarhad Journal of Agriculture*, 36(2). <https://doi.org/10.17582/journal.sja/2020/36.2.427.446>
- [4] Ashraf, E., Sarwar, A., Junaid, M., Baig, M. B., Shurjeel, H. K., and Barrick, R. K. (2020c). An Assessment of In-service Training Needs for Agricultural Extension Field Staff in the Scenario of Climate Change using Borich Needs Assessment Model. *Sarhad Journal of Agriculture*, 36(2). <https://doi.org/10.17582/journal.sja/2020/36.2.427.446>
- [5] Dodds, R., Ali, A., and Galaski, K. (2016). Mobilizing knowledge: determining key elements for success and pitfalls in developing community-based tourism. *Current Issues in Tourism*, 21(13), 1547–1568. <https://doi.org/10.1080/13683500.2016.1150257>
- [5] Banerjee, S. B., and Jackson, L. (2016). Microfinance and the business of poverty reduction: Critical perspectives from rural Bangladesh. *Human Relations*, 70(1), 63–91. <https://doi.org/10.1177/0018726716640865>
- [6] Garg, N., Schiebinger, L., Jurafsky, D., and Zou, J. (2018). Word embeddings quantify 100 years of gender and ethnic stereotypes. *Proceedings of the National Academy of Sciences*, 115(16). <https://doi.org/10.1073/pnas.1720347115>
- [7] Hilty, J., Worboys, G. L., Keeley, A., Woodley, S., Lausche, B. J., Locke, H., Carr, M., Pulsford, I., Pittock, J., White, J. W., Theobald, D. M., Levine, J., Reuling, M., Watson, J. E., Ament, R., and Tabor, G. M. (2020). Guidelines for conserving connectivity through ecological networks and corridors. <https://doi.org/10.2305/iucn.ch.2020.pag.30.en>
- [8] Kamilaris, A., Fonts, A., and Prenafeta-Boldú, F. X. (2019). The rise of block chain technology in agriculture and food supply chains. *Trends in Food Science and Technology*, 91, 640–652. <https://doi.org/10.1016/j.tifs.2019.07.034>
- [9] Muñoz, E. F. P., Niederle, P. A., De Gennaro, B. C., and Roselli, L. (2021). Agri-Food Markets towards Agroecology: Tensions and Compromises Faced by Small-Scale Farmers in Brazil and Chile. *Sustainability*, 13(6), 3096. <https://doi.org/10.3390/su13063096>
- [10] Nations, F. a. a. O. O. T. U. (2018). *Small-Scale Family Farming in the Near East and North Africa Region: Synthesis*. Food and Agriculture Org.
- [11] Nations, F. a. a. O. O. T. U. (2021). *OECD-FAO Agricultural Outlook 2021–2030*. Food and Agriculture Org.
- [12] Nweze, N.J. (2012). Rural Development in Nigeria past approaches, emerging Issues and Strategies for the Future in Nigerian. *Journal of Co-operative Studies*. Vol. 2, 73-89.
- [13] Owigho, O. and Eromedoghene, E.O. (2021). Issues in Rural Development and Management Theories: *International Journal of Research and Innovation in Social Science (IJRISS)*. 6 (1), 354 - 361
- [14] Owigho, O., Onwumere-Idolor, O.S., Ewododhe, A.A. and Akeni, T.E. (2023). Perception of Farm Succession Planning Among Rubber Farmers in Delta State, Nigeria. *Direct Res. J. Agric. Food Sci.* 11 (8), 232-237
- [15] Owigho, O., Eromedoghene, E.O., and Ovwigho, B.O. (2023). Adoption of Improved Cassava Production Techniques in Isoko North Local Government Area of Delta State, Nigeria. *Journal of Agripreneur and Sustainable Development*. 6 (4), 1-9, 2023
- [16] Sustainable Development, Poverty Eradication and Reducing Inequalities. (2022). In Cambridge University Press eBooks (pp. 445–538). <https://doi.org/10.1017/9781009157940.007>
- [17] Zakeri, B., Paulavets, K., Barreto-Gomez, L., Echeverri, L. G., Pachauri, S., Boza-Kiss, B., Zimm, C., Rogelj, J., Creutzig, F., Ürge-Vorsatz, D., Victor, D. G., Bazilian, M. D., Fritz, S., Gielen, D., McCollum, D. L., Srivastava, L., Hunt, J. D., and Pouya, S. (2022). Pandemic, War, and Global Energy Transitions. *Energies*, 15(17), 6114. <https://doi.org/10.3390/en15176114>