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MARKET PARTICIPATION AND FOOD SECURITY STATUS OF BIO-FORTIFIED CASSAVA PROCESSORS IN SOUTH WESTERN NIGERIA

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ABSTRACT

A better understanding of the extent of food insecurity and its determinants, particularly among rural households, is a step towards proffering solutions to this menace. The study assessed market participation and food security status of bio-fortified cassava processors in South-Western Nigeria. A multistage sampling technique was used to source for data from 160 bio-fortified cassava processor through a well-structured questionnaire. Descriptive statistics, household commercialization index, Food Insecurity Experience-Based Measurement Scales-United States Department of Agriculture (FIEMS-USDA) and Multinomial Logistic Regression (MLR) were used to analyze the data. The result of the study showed that the mean age of the processors was 48(±11.36). Majority (70.6%) of the bio-fortified cassava processor had a high market participation level with a mean household market participation index of 63.14±7.23%. About (58.75%) of the respondents were food insecure with moderate hunger level. The result of the MLR showed that farm income, the value of processed bio-fortified cassava output, susceptibility to sickness, membership of association and access to extension services were significantly related to food insecurity status of the bio-fortified cassava processor. Appropriate programs and policy measures that would increase the value of the processed bio-fortified cassava output and farm income should be targeted towards the processors as this would help to reduce their dependency and increase the food security status of their households.

Contribution/Originality: This study is one of the very few studies which have investigated market participation and food security in Nigeria especially among the biofortified cassava processors. It uses new estimation methodology and ascertained the contributing factors that will ensure food security among the biofortified cassava processors in Nigeria if properly harnessed.

1. INTRODUCTION

About 177,948 million tons of cassava were being produced in Africa, according to Otekunrin and Sawicka (2019). Nigeria is regarded as the world's largest producer of cassava with a total of about 20.4 percent of the world export in year 2017 (Otekunrin & Sawicka, 2019). Cassava is a major staple food crop in Nigeria. As defined by Otekunrin and Sawicka (2019) a staple crop is the one that is been eaten regularly and which also provides larger proportions of the population's nutrients. Cassava is an essential component of the diet of about 70 million Nigerians (FAO, 2013). Nigeria, being the largest producer of cassava in the world, is producing an average annual

estimate of 45 million metric tons which had been translated into a major global market share of about 19 percent (Phillips, Taylor, Sanni, & Akoroda, 2004).

Most root crops were predominantly white in color and they do not contain vitamin-A. However, over the decades, series of intervention programs have come into existence targeted towards improving human diets due to increasing incomes and also administration of vitamin-A capsules (Egesi, Mbanaso, Ogbe, Okogbenin, & Fregene, 2006; Ilona, Bouis, Palenberg, Moursi, & Oparinde, 2017). The production of biofortified vitamin-A cassava started in 2011 with the intervention of the International Center for Tropical Agriculture (CIAT) and the International Institute of Tropical Agriculture (IITA) which were funded by Harvest Plus program. Five years after the intervention program, statistics revealed that over 1million of Nigerian farming households grow yellow cassava varieties that contain substantial quantities of vitamin-A even after processing (IITA report, 2019). In Nigeria diets today, yellow bio-fortified cassava represents an additional source of vitamin A (Saltzman et al., 2014).

In Nigeria, vitamin-A cassava after processing is predominantly consumed as garri which means "free flowing creamy white or yellow granular partially gelatinized flour produced from cassava" (Cardoso et al., 2005). Garri is produced through the process of peeling, washing, grating, bagging and dehydration (with the aid of hydraulic press), fermentation, sieving, frying, cooling and packaging. Garri's longevity and also ease of preparation (as compared to other cassava food products) makes it a widely consumed food (Sanni, Adebowale, Awoyale, & Fetuga, 2008). Majority of the bio-fortified cassava processors in Nigeria are still largely on a small-scale production thus affecting their maximum market participation.

Market participation can be regarded as the degree of allocation of some resources (land, capital labor and human services) to the production of agricultural produce directed to the market. On the other hand, market participation is the degree to which a producer/processor transacts in the market as a supplier (Gebremedhin & Jaleta, 2012). In Nigeria, effective market participation is regarded as a sure pathway to pulling the rural people out of poverty through improving their income and food security (Rosegrant, Cline, Li, Sulser, & Velmonte-Santos, 2005). According to Boughton et al. (2007) it is both a cause and a consequence of economic development. Active and effective market participation of bio-fortified cassava processors can be directly linked with their level of food security as they tend to possess a good purchasing power when they effectively and actively participate in marketing of their products.

Food security on the other hand, is one of the several necessary conditions for a population to be healthy and well nourished. It refers to a situation that exist when all people, at all times, have physical, social and economic access to sufficient, safe and nutritious food that meets their dietary needs and food preferences for an active and healthy life (FAO, 2002). Food insecurity reflects uncertain access to enough and appropriate foods (Barret, 2002). Several times, household that appears food secured today, when faced with the problem of poor market participation, might be exposed to food insecurity (Zeller, 2006). The Global Food Security Index (GFSI) of the Economist Intelligence Unit ranked Nigeria as the 80th among 105 countries with food affordability, availability and quality which is rather poor.

Although, few literatures (Adenegan, Olorunsomo, & Nwauwa, 2013; Adesiyan, Adesiyan, & Oluitan, 2012; Agwu, Anyanwu, & Mendie, 2013; Falola, Fakayode, & Ajayi, 2013; Otekunrin & Sawicka, 2019; Tiku & Ugbada, 2012) had examined factors affecting market participation among farmers in different crop value chains in Nigeria. Also, the study (Akerele, Omotosho, & Sholotan, 2013) had examined food security status of rural farming households in Nigeria. However, there is a dearth of empirical studies that have examined the level of market participation among bio-fortified cassava processors in Nigeria generally, particularly, in relation to the household food security status. The study, thus, proposed to fill this research gap. It is against this background that the study specifically described the socio-economic characteristics of the processing households in the study area; determine the level of market participation among the bio-fortified cassava processors in the study area; examined the food

security status of the bio-fortified cassava processors and analyzed the factors affecting the food security status of the bio-fortified cassava processors in South western, Nigeria.

2. METHODOLOGY

2.1. Area of Study

The study was carried out in South-Western region of Nigeria. The South-West region of Nigeria represents a geographical area covering latitude 6^0 North and 4^0 South. The South-Western region of Nigeria comprises six states including Osun, Ekiti, Oyo, Ondo, Lagos and Ogun State. The region is bounded in the north by Kogi and Kwara States, in the South by Atlantic Ocean, in the west by Republic of Benin and in the East by Edo and Delta State. The South western region of Nigeria can boost of different varieties of arable food crops since the climatic conditions support the production of various food crops including cassava, maize, groundnut etc. A large proportion of the bio-fortified cassava were being produced and processed in South Western region of Nigeria, as the region was a major target for the production of the bio-fortified cassava by IITA and Harvest plus, hence the choice of the study area.

2.2. Sampling Procedures and Sample Size

Multistage sampling procedures were employed for the study. The first stage involved purposive selection of two States including Oyo and Osun States due to availability of bio-fortified cassava processors in the State. The second stage involved the purposive selection of two Local Government Areas from each States because of the concentration of bio-fortified cassava processors in the areas. The third stage involved purposive selection of two communities from each of the selected LGAs. At the fourth stage, twenty bio-fortified cassava processors were purposively selected from each community to make a total of 160 (One hundred and sixty) respondents. Primary data were used for the study. The primary data were sourced from cross-sectional survey of bio-fortified cassava processors with the aid of well-structured questionnaire to cover information about the socioeconomic characteristics of respondent, marketing activities they carried out, inputs resource use in processing and their rate of consumption. Data were collected during the period of June 2019- Oct 2019.

2.3. Analytical Techniques

The data were analyzed using descriptive statistic, household commercialization Index, Food Insecurity Experience-Based Measurement Scales-United States Department of Agriculture (FIEMS-USDA) and Multinomial Logistic Regression

2.4. Descriptive Statistics

Descriptive statistics were used to described the socio-economic characteristics of the bio-fortified cassava processors.

2.5. Household Commercialization Index (HCI)

The study employed the household commercialization index (HCI) to determine household level of market participation.

$$HCI_i = \frac{\text{Gross value of processed bio-fortified cassava products sales hh}i}{\text{Gross value of all processed bio-fortified cassava products hh}i} \times 100 \quad (1)$$

The household commercialization index (HCI) in Equation 1 was used to determine household specific level of market participation. The index measures the ratio of the gross value of processed cassava products sales by household ***i*** in year ***j*** to the gross value of all the processed cassava products by the same household ***i*** in the same

year ***j*** expressed as a percentage. The index measures the extent to which household bio-fortified cassava processor is oriented toward the market. A value of zero would signify a totally subsistence-oriented household and the closer the index is to 100, the higher the degree of commercialization. The advantage of this approach is that commercialization is treated as a continuum thereby avoiding crude distinction between "commercialized" and "non-commercialized" households.

However, if HCI ≤ 25% processors participate very low in the market, if HCI= 26-50% processors participate averagely (medium) in the market, if HCI =51-75% processors participate highly in the market and if HCI=75-100% processors participate very high in the market.

2.6. Food Insecurity Experience-Based Measurement Scales (FIEMS-USDA)

The food security status was captured using the USDA 18-question Food Security Survey Module. The USDA scale contains 18 items for households with children and 10 items for households without children, so a complete response requires either 18 or 10 valid answers as presented in Table 1.

Table-1. Food insecurity experience-based measurement scales (FIEMS-USDA).

S/No	Questions/Statements	NT	ST	OT
1	We were worried our food would run out before we got money to buy more			
2	The food we bought just didn't last and we didn't have money to get more			
3	We couldn't afford to eat balanced diet			
4*	We relied on only a few kinds of low-cost food to feed the children			
5*	We couldn't feed the children a balanced meal			
6*	The children were not eating enough because we just couldn't afford enough food			
7	Did some adults ever have to cut the size of their meal or skip meal because there wasn't enough money to buy?			
8	How often did this happen in the last 12 months?			
9	Did some adults ever have to eat less than you felt you should eat because there wasn't enough money for food?			
10	Were some members ever hungry but didn't eat because you couldn't afford enough food?			
11	Did some members ever lost weight within the last 12 months because there wasn't enough food?			
12	Were there ever a time within the last 12 months that some adults could not eat for a whole day because there wasn't enough money to buy food?			
13	How often did this happen in the last 12 months?			
14*	Did you ever have to cut the size of some of the children's meal within the last 12 months because there wasn't enough money to buy food?			
15*	Did any of the children ever have to skip meals within the last 12 months because there wasn't enough money to buy food			
16*	How often did this happen in the last 12 months?			
17*	In the last 12 months, were the children ever hungry but you just couldn't afford more money?			
18*	In the last 12 months, did any of the children ever not eat for a whole day because there wasn't enough money for food?			

Note: NT= Never true, ST= Sometimes true, OT= Often true
*Not applicable to households without children.
Source: USDA Guide, 2000.

Households are classified into food security status categories based on the number of food-insecure responses to the questions consistent with statistical evidence that this number reflects the level of food hardship experienced by the family. According to USDA, the four categories of household food security are;

i. Food secure (FS): if households reported fewer than 3 food insecure responses for households with or without children.

ii. Food Insecure without Hunger (FIH): if households report more than 2 but fewer than 8 food-insecure responses for households with children and more than 2 but fewer than 6 food insecure responses for households without children.

iii. Food Insecure with Moderate Hunger (FIMH): if households report more than 7 but fewer than 13 food-insecure responses for households with children and more than 5 but fewer than 9 food-insecure responses among households without children.

iv. Food Insecure with Severe Hunger (FISH): if households reported more than 12 food insecurity responses among households with children and more than 8 but fewer than 11 food insecurity responses among households without children.

2.7. Multinomial Logistic Regression Model

Factors affecting the food security was captured using Multinomial logit model (MNL) after determining the food security status of bio-fortified cassava processing households. The explicit form of equation is given below:

$$Z_i = \gamma_o + \gamma_1 X_1 + \gamma_2 X_2 + \gamma_3 X_3 + \gamma_4 X_4 + \gamma_5 X_5 + \gamma_6 X_6 + \gamma_7 X_7 + \varepsilon \quad (2)$$

From Equation 2,

Z_i = Food security status of the household (0, 1, 2, 3)

Prob (Y_i= j) = J = food security status of households in the order set as:

j = 0, if Food insecure With Severe Hunger (FIWSH),

j = 1, if Food insecure With Moderate Hunger (FIWMH),

j = 2, if Food insecure Without Hunger (FIWH), and

j = 3, if. Food Secure (FS),

C_i = vector of explanatory social factors conditioning the choice of the j^{th} alternative

α, β = Parameters to be estimated

ε = *Error term.*

Z_1= Age of household head (years)

Z_2= Level of education in (years)

Z_3= Household size (Numbers)

Z_4= Distance to market (km)

Z_5= Farm income (naira)

Z_6= Off-farm income (naira)

Z_7= Value of processed bio-fortified cassava output (kilogram)

Z_8= Access to credit (1=yes; 0 =otherwise)

Z_9= Food expenditure in naira

Z_{10}= Susceptibility to sickness (1=yes; 0=otherwise)

Z_{11}= Membership of association (1=member; 0= otherwise)

Z_{12}= Household Commercialization Index (percent)

Z_{13}= Access to extension service (1=yes; 0= otherwise)

ε = Error term

3. RESULTS AND DISCUSSION

3.1. Socio-Economic Characteristics of the Biofortified Cassava Processors

Socio-economic characteristics of the bio-fortified cassava processors were presented in Table 2. From Table 2, the mean age of the processors was 48(±11.36) which shows that the processors were in their productive and active age. They are thus expected to have adequate energy to carry out their processing activities on the processing sites.

About 61% of the bio-fortified cassava processors were female and thus implies that processing of bio-fortified cassava were women dominated in South West Nigeria. This agreed with Ehinmowo and Ojo (2014); Adeniyi and Akande (2015) that cassava processing is mostly carried out by women in Nigeria. About 77% of the respondents were married indicating that they were responsible. The mean years of formal education were 12.72 (±4.87). This shows that bio-fortified cassava processors were literate as they possess the basics of educational qualities. This might have influenced their decision to ventured into processing of improved cassava varieties (bio-fortified cassava) instead for local cassava as they were better informed. This result agreed with Adeniyi and Akande (2015) and Abass et al. (2019) that cassava processors in Nigeria are literate and are thus able to read and write. The average household size was 8.25 (±4.32) which indicates that they had a relatively large household size. Thus, the use of family labour is possible in the processing of bio-fortified cassava in South Western, Nigeria. About 72% of the respondents do not have access to credit facilities which might be responsible for their enterprise being on a small scale. It might also be due to lack of collateral needed to obtain loan. The average years of processing experience was 16.84(±8.76) years which indicates that majority of the respondents have been into cassava processing for many years and are thus expected to have the necessary experience to boost their production. Majority (79%) of the respondents were into one form of cooperative society or the other. This agree with Ehinmowo and Ojo (2014); Adeniyi and Akande (2015). Thus, processors in South Western, Nigeria tend to enjoy group dynamics which might help them to actively participate in the marketing of their processed bio-fortified cassava output.

Table-2. Socio-economic characteristics of the bio-fortified vit-a cassava processors.

Variables	Bio-fortified vitamin-A cassava Processors
Age (years)	48(±11.36)
Female (%)	61.00
Married (%)	77.00
Formal education (years)	12.72 (±4.87)
Household size (#)	8.25 (±4.32)
Access to credit (%)	72.00
Years of experience (years)	16.84(±8.76)
Membership of association (%)	79.00

3.2. Level of Market Participation Among Bio-fortified Cassava Processors

The result of the level of market participation among bio-fortified cassava processors were presented in Table 3. The result shows that 4.4% of the respondents had a low market participation while 20% had a medium market participation level. Majority (70.6%) of the respondents had a high market participation level while 5% of the respondents had a very high market participation level. The mean household market participation index was 63.14±7.23%.

Table-3. Distribution of bio-fortified cassava processors according to level of market participation.

Commercialization index	Frequency	Percentage
Low (≤25%)	7	4.4
Medium (26–50%)	32	20.0
High (51 – 75%)	113	70.6
Very high (≥76%)	8	5.□
Total	160	100.00
Standard deviation	7.23	
Mean comm. Index	63.14%	
Min. comm. Index	24.72%	
Max. comm. Index	86.73%	

This indicates that bio-fortified cassava processors highly participate in marketing of processed biofortified cassava in South Western, Nigeria. This implies that bio-fortified cassava processors do not only consume all their

products but they take a larger proportion of their products to the market in exchange for money. Their products include bio-fortified vitamin A yellow garri, fufu, bio-fortified cassava chips etc. This result implies that they do not only process biofortified cassava for household consumption alone but also for economic gains from which they will be able to purchase other goods/food items needed within their households which might help them attain a certain level of food security.

3.3. Food Security Status

The USDA food security core module questionnaire was used to categorize households into four food security level which were; high food security, food insecure without hunger, food insecure with moderate hunger and food insecure with severe hunger. The result of the food security status of the bio-fortified cassava processors were presented in Table 4. From Table 4, about 3.75% of the respondents were food secured while 20.63% were food insecure without hunger. About (58.75%) of the respondents were food insecure with moderate hunger while 16.87% were food insecure with severe hunger. This implies that bio-fortified cassava processors were food insecure in South Western, Nigeria. This might be due to a host of other factors including the poor economic status of the country. This result is consistent with the findings of Ayoade and Ige (2013) that reported that the food insecurity among farming households in South Western Nigeria was about 65%.

Table-4. Food security status.

Food Security Category	Frequency	Percentage
High Food Security (HFS)	6	3.75
Food Insecure without Hunger (FIWH)	33	20.63
Food Insecure with Moderate Hunger (FIMH)	94	58.75
Food Insecure with Severe Hunger (FISH)	27	16.87
Total	160	100.00

3.4. Factors Affecting Food Security Status of Bio-Fortified Cassava Processing Households

The estimation of the multinomial logit model for this study was undertaken by normalizing one category, which is normally referred to as the "base category." In this analysis, the first category (High Food Security) was the base category. The estimated coefficients of the MNL model, along with the levels of significance, were presented in Table 5. The MNL was run with and without explanatory variables such as access to extension, membership in association and distance to output market assuming this variable to be endogenous as they are in many studies. The results indicated that the inclusion of theses variables does not significantly change the parameters of the estimate (the Hausman test has been employed to compare the models with and without these variables). Also, the ordinary least square model was fitted and the model was tested for multicollinearity using the variance inflation factor (VIF). The variance inflation factors are less than 9 (1.03-2.07) which indicate that multicollinearity is not a serious problem in this model. Lastly, the model was run and tested for the validity of the independence of the irrelevant alternatives (IIA) assumptions by using both the Hausman test for IIA and seemingly unrelated postestimation procedure (SUEST). Both tests failed to reject the null hypothesis of independence of market participation on food security status, suggesting that the MNL specification is appropriate to model of the food security status of the processors (X^2 ranged from 3.42 -38.36, with probability values ranging from 0.67 to 1.00 in the case of Hausman test and X^2 ranging from 9.06 to 26.18, with a p value of 0.31- 0.82 in the case of SUEST). The result in Table 5 showed that farm income, value of processed bio-fortified cassava output, susceptibility to sickness, membership of association and access to extension services significantly affected the food insecurity status of the biofortified cassava processors in South Western, Nigeria.

Table-5. Estimates of the multinomial logit for food security status among bio-fortified cassava processing households.

Explanatory Variables	Food insecure without hunger			Food insecure with moderate hunger			Food insecure with severe hunger		
	coefficient	Std. Error	*t-ratio*	Coefficient	Std. Error	*t-ratio*	Coefficient	Std. Error	*t-ratio*
Age	-0.111	0.077	-1.43	0.026	0.066	0.39	-0.246	0.247	-0.99
Education	-0.128	0.276	-0.46	0.267	0.269	0.99	1.890	1.302	1.45
Household Size	0.125	0.112	1.12	-0.075	0.120	-0.63	0.448	0.382	1.17
Distance to mk	-0.006	0.015	-0.40	0.008	0.016	0.53	0.003	0.012	0.26
Farm income	2.37E-06***	8.47E-07	2.79	1.65E-06	1.15E-07	1.43	-0.000	0.000	-0.00
Off-farm income	-0.008	0.122	-0.07	-0.442	0.306	-1.44	3.118	2.73	1.14
Value of cassava processed	-1.116**	0.552	-2.02	-0.983*	0.561	-1.75	1.454	1.753	0.83
Access to market	-2.52E-11	1.65E-07	-1.23	-0.003	0.002	-0.13	0.001	0.011	1.53
Food expenditure	0.008	0.010	0.83	0.000	0.009	0.09	0.001	0.007	0.26
Susceptibility to sickness	0.200**	0.083	2.41	-0.013	-1.86	-0.07	0.078	0.467	0.17
Membership of association	11.577**	4.602	2.52	9.439**	4.563	2.07	-0.916	21.106	-0.04
Commercialization index	0.182	1.214	0.15	1.366	1.068	1.28	234.52	1351.7	0.17
Access to ext.	0.161***	0.061	2.61	0.018	0.081	0.23	-0.430	1.068	-0.40
_cons	-2.074	3.590	-0.58	-1.494	3.611	-0.41	-237.82	1353.16	-0.18
Base category		High Food security							
LR $chi^2(33)$		121.74							
Prob > chi^2		0.0000							
Pseudo R^2		0.632							

Note: ***, **, *Significant at 1%, 5%, and 10% probability level, respectively.

3.5. Farm Income

The coefficient of farm income (2.37E-06) for food insecurity without hunger was significant at 1% level of probability. This implies that as farm income increases, the level of food insecurity decreases as the respondents tend to have more purchasing power which will help them reduced their hunger level. This can be adduced to the fact that bio-fortified cassava processors might also be involved in other farming or processing activities which might help increase their farm income, hence they tend to move from food insecurity status to food security status. However, a decrease in level of farm income means they tend to move to a more dire situation of food insecurity status.

3.6. Value of Processed Bio-Fortified Cassava Output

The coefficient of value of processed bio-fortified cassava output for food insecurity without hunger and food insecurity with moderate hunger was significant at 5% and 10% level of probability respectively. This implies that as the bio-fortified cassava processors increase the level of output of processed cassava, the level of food insecurity tends to decrease. This is because the respondents tend to earn more from the sales of the increased value of processed bio-fortified cassava output which subsequently lead them to actively participate in marketing of their products and as such increases their purchasing power which tend to increase their consumption level their by moving them from food insecurity status to a food secured level.

3.7. Susceptibility to Sickness

The coefficient of susceptibility to sickness for food insecurity without hunger was significant at 5% level of probability. This implies that the more the households are susceptible to sickness, the increase in food insecurity status of the processing households. This might be due to the fact that more money that was supposed to be spent on consumption might be spent on treatments of members of the households who were sick, hence reducing the level of consumption of the household. Although, it should be noted that rural dwellers in Nigeria utilized traditional method of treatment and as such they were not expected to spend much on treatment. By so doing, the processors are expected to save more from treatment and use the savings for household consumption which will help them to be food secured.

3.8. Membership in Association

Membership in association for food insecurity without hunger and food insecurity with moderate hunger were significant at 5% each respectively. This implies that membership in association reduces food insecurity level of the bio-fortified cassava processors in South Western, Nigeria. This might be due to the fact that food insecurity coping strategies might be discuss within the association and also, the fact that the respondents tend to enjoy the benefits of group dynamics which is expected to help them reduce the level of food insecurity in South Western, Nigeria. During association meetings, new innovative ways of doing things as regarding their enterprise were majorly discussed and thus it is expected that if members of the association adopt the innovative methods, it might help them increase their production/processing outputs. This is also applicable to bio-fortified cassava processors as new technology for processing and some other useful information were majorly discussed withing their association and these information if well followed is expected to help them increase their output and by so doing they tend to increase their market participation level and subsequently lead to them having more purchasing power. With this they will be able to purchase other goods/food items needed within the households which will help them attain a level of food security.

3.9. Access to Extension Services

Access to extension services for food insecurity without hunger was positive and significant at 1% level of probability. This indicates that frequent access to extension agents might reduce the level of food insecurity in South Western, Nigeria. This is true because extension agents tend to bring new ideas to the processors which is expected to help them increase their production level thus increasing their purchasing power and subsequently reduces food insecurity level among the bio-fortified cassava processors. When extension agents educate the processors on the innovative methods of processing bio-fortified cassava, they tends to increase their products which will lead to more products available for marketing and gain more economic power. With this, they can increase their purchasing power for other goods/food items they need within their households.

4. CONCLUSION

The study indicated that biofortified cassava processors in South Western, Nigeria participated actively in marketing of biofortified cassava products as larger proportion of the respondents scored high on the household commercialization index. The study further concluded that majority of the bio-fortified cassava processing households were food insecure measuring high on food insecurity scale as evidenced by the food security categories. The study concluded that farm income, value of processed bio-fortified cassava output, susceptibility to sickness, membership of association and access to extension agents significantly affect food insecurity status of the biofortified cassava processors in South Western, Nigeria. Appropriate programs and policy measures by the government and stakeholders that would increase the value of the processed bio-fortified cassava output and farm income should be targeted towards the processors as this would help to reduce their dependency and increase the food security status of their households.

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