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The Influence of Socio-Economic Variables of Farmers on their Choice of Cassava Varieties in Kogi State, Nigeria.

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This study examined the influence of socioeconomic variables of farmers on their choice of cassava varieties in Kogi State of Nigeria. A total of 360 cassava farmers were selected through multi-stage random sampling procedure. Data collected through structured questionnaire were analyzed using descriptive statistics, customer-buying behavioral model and dynamic programming model. The results showed that TMS cassava variety (variety A) is more popular among the college-graduate farmers, farm experience of above 20years, farm size of 3–5hectares and farm income of ₦50,000-100,000. Similarly, the educational status of farmers, farm size, farming experience and farm income also influenced the choice NS variety (variety B) and local variety (variety C). The small scale farmers, illiterates and farmers with small farm income dominated the use of local variety. The study then recommends special credit scheme for small scale farmers and education of illiterate farmers on the advantages of using improved cassava variety. **[S. J. Ibitoye. The Influence of Socio-Economic Variables of Farmers on their Choice of Cassava Varieties in Kogi State, Nigeria. International Journal of Agricultural Science, Research and Technology, 2011; 1(4):185-193].**

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1. Introduction

Nigeria is currently the largest producer of cassava (Manihot sp.) in the world with an average annual output of over 35million metric tons of tuberous roots, which is about 19% of total world production (FAO, 2005). Cassava is produced in Nigeria largely by small-scale farmers using simple farm implement. The average land-holding is less than two hectares and for most farmers, land and family labour remain the essential inputs. Land is held on communal, inherited or rented basis. Cases of outright purchase of land are rare.

Capital is a major limitation in cassava farming, only few farmers have access to rural credits. Almost all farmers in the main cassava belt of the south-west, South-East and central regions of the country grow cassava. Cassava is typically intercropped as a main or minor crop.

Cassava production has been increasing for the past 20years in area cultivated and in yield per hectare (Amans, 2004). The rapid growth in cassava production according to Alabi and Oviasogie (2005) has been primarily due to population growth, large internal market demand complimented by the availability of high yielding improved varieties of cassava and the existence of improved processing technique.

Data on area cultivated, annual output and yield per hectare of cassava in Nigeria and Kogi State, between the years 2001 and 2010 are presented in Table 1. The table showed a progressive rise in the area planted to cassava during the period under review. During this period, the increase in the number of hectares of land planted to cassava was 13.8% for Nigeria, for Kogi State, there was an increase in the area of land cultivated to cassava by 61,170.0 hectares which is about 33.46%. Similarly, there was progressive increase in the output of cassava for both the country and Kogi State during the period under review.

The yield of cassava for the country was 12.23 metric tons per hectare in 2002 while it was 14.31 Metric tons per hectare in 2007. This shows an increase of about 1.99 metric tons per hectare or 16.12%. There were fluctuations in the yield of cassava during the same period for Kgoi State. The progressive increase in the production of cassava witnessed in the recent years was as a result of its adaptation to shorter fallow period , relative drought tolerance , ability to thrive in soils of low fertility and its ability to store in the soil (Coster and Lge, 2009;

Edeh and Ojemade, 2009; Fulaini and Anda, 2006). Cassava multiplication, distribution and adoption of improved varieties have increased significantly in Nigeria over the years. Cassava is the most widely grown root crop in the country because it plays vital role in the food security of the rural economy (Nwakor et al, 2007). Cassava is easy to cultivate and maintain compared to yam where a lot of time and resources are expended on its production.

There are many improved cassava cultivars under cultivation in Kogi State , notable among them are the TMS varieties developed by the International Institute for Tropical Agriculture (IITA) and the NR varieties developed by the National Root Crops Research Institute (NRCRI). Some of those TMS varieties are the TMS 30001, TMS 30211 and TMS 30395. Those of NR varieties are; NR7721, NR7734 and NR8208. The local names of those varieties among the farmers in the state are: Governor, Omotoso, Oko-iyawo, Agric, New Agric and Enugu respectively (KADP, 2010).

These improved varieties along with the local varieties can be distinguished from each other by their morphological characteristics such as leaf size, colour and shape, branching habit , plant height, colour of stem, shape of tuber, time of maturity , yield and level of cyanogenic glycosides in the tuber and leaves (KADP, 2010). However, Obinne (1991) opined that the desired attributes preferred by farmers are; low level of hydrocyanic acid (HCN) in its products, pests and disease resistance, early maturity, ability to suppress weeds, high yield , resistant to drought , storage

Cassava production in Nigeria is hindered by a wide range of constraints which include :- pests and diseases ,agronomic problems , land degradation, shortage of planting materials, food policy changes, limited processing options and inefficient extension delivery system (Agwu, 2007). Socioeconomic factors affecting cassava production relates to inadequate resource allocation which includes – land, ,labour, capital, and infrastructural facilities. Some of the problems associated with adoption of improved cassava varieties include; Vegetation of the area, population density of the farmers, relative competition with other carbohydrate crops , availability of planning materials and farmers perception of overall benefits of improved cassava varieties relative to local varieties (Obinne, 2009). Famers are generally aware of the benefits of inorganic fertilizer, but the commodity is scarce which constitute another major hindrance in cultivating improved varieties of cassava (Agwu, 2007).

Cassava is an important food in the tropical areas of Africa, Asia and Latin America. It is estimated that cassava provides about 40% of all calories consumed in Africa (Ogundari and Ojo, 2006). In Nigeria most of the cassava produced is consumed locally. it is an important staple food and account for about 70% of the daily calories intake of over 50 million Nigerians (Nweke, Spencer & Lynam, 2002).

Table 1. Cassava Production in Nigeria and Kogi State (2001-2010)

Year	Nigeria Production Figure			Kogi State Production Figure		
	Area Cultivated ('000Ha)	Cassava Output ('000Mt)	Cassava Yield (Mt//ha)	Area Cultivated ('000Ha)	Cassava Output ('000Mt)	Cassava Yield (Mt//ha)
2001	NA	NA	NA	182.00	2704.00	15.20
2002	2337.43	28804.18	12.23	177.90	2785.12	15.66
2003	2491.81	30392.86	12.20	173.20	2854.83	16.48
2004	2499.80	30668.30	12.27	175.24	2901.63	16.95
2005	2570.25	32015.29	12.46	200.75	2666.41	14.78
2006	2790.00	35,614.35	12.77	264.18	3394.34	15.55
2007	2659.00	38041.00	14.31	243.96	3631.94	14.89
2008	NA	NA	NA	252.84	3741.85	14.80
2009	NA	NA	NA	269.27	4011.26	1490
2010	NA	NA	NA	285.96	4396.34	1537

Sources: i. National Bureau of Statistics (2008) NA: Not Available Mt: Metric tones
ii. Kogi Agricultural Development Project (2011)

The tuber is utilized in many food preparations in Africa some of the most common cassava based foods in Nigeria include the followings :- Abacha, Elubo-Ilafun , Gari, Kpokpo-Gari and Tapioca. Cassava flour is used in many bakery products especially bread. Research into the used of cassava flour in bread , cakes and biscuits making have shown that a good quality breads of cassava can substitute the use of wheat up to 100% (Babaleye, 2009). The major setback in the use of cassava for human consumption is the presence of cyanogenic glycosides which upon hydrolysis produce a very toxic cyanide. However, over the years cassava consumers have developed various processing methods to detoxify the tubers and leaves, notable among those methods are; boiling, drying rating, and fermentation. There is considerable potential for using cassava feed as a ration for feeding livestock. As a result of short supply and competition for cereals by both human beings and livestock, cassava chips have been carefully formulated as animal feed because of its high energy content and the low cost. Research had shown that substituting maize up to 44% with cassava in pig feed does not lead to any reduction in the performance of pigs (Ogundari and Ojo, 2006).

Cassava starch in an important industrial raw material cassava starch has wide application in industry, it is used in the food industry in many preparations including sauce , gravies ,mustard powders, baby foods ,tapioca products ,glucose production , confectionary and bakery products. It is also used as jelly or thickening agent. It is used extensively in the manufacture of paints. In the textile industry, it is used for warp sizing, cloth and felt finishing. As a result of the importance of cassava in eradicating hunger and poverty in Nigeria, this work is designed to study the socioeconomic variables of cassava farmers and how these variables influence their choice of the major cassava varieties in Kogi State of Nigeria.

2. Materials and methods

The study was conducted in Kogi State of Nigeria. The State is located in the central region of Nigeria. The headquarter of the state is Lokoja which is situated at the confluence of rivers Niger and Benue making the state to be popularly known as the confluence state. The state like any other state in the country has three senatorial districts. Each of these senatorial districts is inhabited by one of the three major tribes in the state. Thus, the eastern senatorial district is inhabited by the Igala speaking people. The central senatorial district by Ebira people and the western senatorial district by the Yoruba people. Minor tribes in the state inclube: Bassa-nge, Basa-komo, Nupe, Kupa, Kankanda, ogori-Magongo and Gwari. The state consists of 21 Local Government Area. Kogi State has a total population of 3,278,487 people and is made up of 1,691,737 males and 1,586,750 females (NPC, 2004).

The total land mass of Kogi State is about 30,354.74 square kilometers. About 2 million hectares of her land is cultivable, but only 0.5 million hectares are currently under cultivation (KOSEEDs, 2004). Farming is the predominant occupation of the people of Kogi State. Though the major farming operation is crop production, a lot of fishing activities on rivers Niger and Benue are carried out. It is also a common practice to find each farming family keeping one form of livestock or the other such as poultry, rabbitary, piggery, sheep and goat on a small-scale.

Under the Kogi State Agricultural development Project (KADP), the state is divided into four agricultural zones. Zone A has it's headquarter at Aiyetoro-gbede and the headquarter of zone B is at Anyigba. The zonal headquarter of zone C is at Koton-Karfe, while that of zone D is at Alloma. All the local government areas in each agricultural zone are similar in terms of vegetation, socio-cultural activities and agricultural practices. One local government areas involve in the survey. From each of the four local government areas selected, random samples of two communities were selected from the list of the communities compiled during the 1993 Village Listing Survey (VLS) of KADP. In all, a total of eight communities were involved in the survey. Finally, from each of the eigth communities, a random sample of 45 respondents was selected to give a total of 360 respondents.

Both primary and secondary sources of data collection were used secondary data were collected from the Headquarter of KADP at Lokoja. The primary data on the other hand were collected through field survey by the use of structured questionnaire. The questionnaire was administered to the selected farmers by thee enumerators of KADP. The data obtained on socio-economic characteristics of respondents include: sex, age, family size, educational status, farming experience, farm size and farm income.

Varieties of cassava were categorized into three as follows:- variety A (TMS variety) variety B (NR variety) and variety C (Local variety). Farmers were then asked of the number of each of the variety of cassava cuttings planted during the last planting season. The number of cassava cutting planted is preferable to the number of farmers that actually adopted each variety because, quantity planted will show better the popularity and the distribution of each variety to total output of cassava in the state.

Furthermore, most cassava farmers in the state engaged in the planting of the three varieties at the same time. The number of stands of each cassava variety planted by each respondent is easier and more accurate to measure than the quantity of cassava produced. The study is more interested in buying ability, therefore, the number of cassava stands was considered more appropriate than the number of farmers that adopted each variety or quantity of cassava produced. All the instruments were successfully completed, recovered and analyzed by the researcher.

Model Specification

A customer buying behavioral model which involved the application of dynamic programming (DP) was applied to analyze the data. Thierauf and Klekamp (1995) defined behavioral model as the study of observable and verifiable human behavior that employ scientific procedures such as the experimental method and the planned approach. Behavioral models are generally inductive with special focus on why customers or employees behave as they do whether as an individual, a member of a small or large group or a member of a market segment or firm. This model is employed to study the behavior of cassava farmers in the use of three popular cassava varieties in Kogi state of Nigeria.

Within the framework of dynamic programming, an equation that expresses the maximum number of units planted for the three varieties for the various socio-economic variables during the test period is given as follows:

$$C_3 (V_3) = \max [C_2 (V_2) + C_3 (V_3\text{-}V_2)]$$

$$0 \leq V_2 \leq V_3$$

Where

$C_3 (V_3)$ = Maximum quantity of varieties A, B and C under the various socioeconomic variables.

$C_2 (V_2)$ = Maximum quantity of varieties A and B planted under the various socioeconomic variables.

$C_3 (V_3\text{-}V_2)$ = Maximum quantity of variety C planted under the various socioeconomic variables.

Thierauf and Klekamp (1995) used customer buying behavioral model to evaluate the women's buying habits for three new cosmetics introduced through television advertisements. The study involved 600 women classified as to the following educational levels- college –graduate college-3 to 4 years, college-1 to 2 years, high purchases they had made for each product and their reason for purchases. The reasons were categorized into three- price, need or attention. After the presentation of the behavioral aspects of the study, the technique of dynamic programming was then applied to analyze the problem further. The study revealed that based on attention, the optimum combination is the college-3 to 4 years for product 1, college-graduate for product 2 and college-graduate for product 3.

In a similar study, Ibitoye (2010) investigated the influence of farm size, educational status and income on the adoption of maize varieties in Kogi state of Nigeria. In the study maize varieties were categorized into three, while farm size, educational status and farm income were equally categorized into three each. The technique of dynamic programming was applied to analyzes the influence of these various categorizes of farm sizes, educational status and farm income on the adoption of the three varieties of maize. The result showed that the optimum combinations for variety C were farm size of less than 3.0Ha, educational level of illiterates and farm income of less than ₦50,000. For variety B, the optimum combination were above 5.0Ha for farm size, college-graduate for educational level and above ₦100,000 for farm income. The optimum combinations for variety A were farm size of 3.0-5.0 Ha, education level of college-graduate and farm income of ₦50,000-₦100,000. This study intends to make use of similar approach to study the influence of some socioeconomic variables on the choice of cassava varieties in Kogi State of Nigeria.

3. Results and discussion

The analysis of the influence of socioeconomic variables of cassava farmers on their use of cassava varieties in Kogi State of Nigeria is presented in Tables 2, 3, 4 and 5. Table 2 presents the categorization of the number of cassava varietal stand under the various socioeconomic variables. The Table showed that variety A which is the TMS variety developed by International Institute for Tropical Agriculture (I I T A) is the most popular among the three varieties. It has the highest number of 4.4million stands which is about 42% of the total cultivars. The total available cassava stands among the 360 respondents were 10.528 million. Table 2 further revealed that varieties B (NS variety) developed by the National Root Crop Research Institute (N R C R I) and variety C which is the local variety contributed about 38% and 30% of the total cassava among the respondents. The distribution of variety A into the various socioeconomic variables showed that both male and female cassava farmers have equal stands of cassava cultivars (2.2 million each). Other socioeconomic variables revealed that the highest number of cassava cultivars in variety A were found in age bracket of over 50 years, family size of 1-5 members, Educational status of college – graduate, farming experience of above 20 years, farm size of 3-5 hectares and farm income group of ₦50,000 – ₦100,000.

Table 2. Categorization of the Number of stands of cassava Varieties under the various socioeconomic variables

Variables	VarietyA (No)	Variety B (No)	Variety C (No)	Total (No)
Sex				
Male	2200	2949	3120	8269
Female	2200	59	0	2259
Total	4400	3008	3120	10,528
Age (yrs)				
< 25	0	59	0	59
25– 50	1956	2625	2411	6992
> 50	2444	2625	709	3477
Total	4400	3008	3120	10,528
Family Size (No)				
1 – 5	1039	0	0	1039
6 - 10	3178	2831	2831	9168
> 10	13	177	236	321
Total	4400	3008	3120	10,528
Education Level				
Illiterates	1328	928	1712	3968
primary school	1376	992	928	3296
college –graduate	169	1088	480	3264
Total	4400	3008	3120	10,528
Farm Experience (years)				
1 – 10	611	531	1796	2895
11- 20	489	295	993	1711
> 20	3300	2182	331	5922
Total	4000	3008	3120	10,528
Farm size (Ha)				
< 3	1296	368	1952	3616
3 - 5	1632	816	1168	3616
> 5	1472	1824	0	3296
Total	4400	3008	3120	10,528
Farm Income(₦)				
< 50,000	1296	288	1584	3168
50,000 -100,000	1568	1088	1440	4096
>100,000	1536	1632	96	3264
Total	4400	3008	3120	10,528

A critical look at the distribution of variety B among the socioeconomic variables showed that male dominated in the sex group. The age group of 25 – 30 years dominated in the age category. Family size of 6-10 members, farming experience of over 20 years, Farm size of over 5 hectares and farm income group of over ₦100, 000 also dominated variety B. However, under the educational status, the distribution of variety B tends to cluster together regardless of educational level. For variety C, the distribution of the cassava cultivars followed the same pattern with that of variety B, under educational status. Respondents in the farming experience of 1 – 10 years, farm size of less than 3 hectares and farm income of less than ₦50,000 dominated the cultivation of variety C.

In order to confirm the popularity of each of these three varieties of cassava among the various categories of socioeconomic variables, the customers buying behavioral model presented in Table 2 is subjected to further investigation through the application of dynamic programming. The data in table 3 shows that the optimum number of units of cassava stands in the various categories of socioeconomic variables are the starred (*) numbers for each column. This is represented by M2 (V2) in the dynamic programming model.

The distribution of cassava stand in varieties A and B against variety C is presented in Table 4. In a similar manner to the analysis in the Table 3, the term M3(V3) in the dynamic programming model based on the various socioeconomic variables are represented by the starred items in Table 4. Since the major concern is on the combination of socioeconomic variable which results in the highest unit of cassava stand, reference must be made to Table 4 first before Table 3.

The highest starred value in Table 4 is 8269 for sex which is under the male for variety C and male and female for both varieties A and B. A careful observation of Table 3 showered that the highest starred value in the table is 5149. This indicates that the optimum combination is male for variety B and both male and female for variety A.

Under the age group, the highest starred value in Table 4 is 7480 which is under 25 – 50 years age group for variety C and above 50 years for both varieties A and B. An observation of Table 3 showered that the highest starred value in the table under the age group is 5069.

This showed that the optimum combination is above 50 years for variety A and 25 – 50 years in variety B. The highest starred value in the Table 4 for family size is 8893 representing family category of 6 – 10 persons for all the three varieties.

Under Table 3, the highest starred value for household size is 6009. This confirmed that the optimum combination is 6 – 10 persons for both varieties A and B. The analysis of the educational level in Table 4 showed that the highest starred figure is 4416, which correspond to illiterates in variety C and college –graduate in varieties A and B.

Further investigation into farm experience revealed that the highest starred value in Table 4 is 7278 which is 1 -10 years in variety C and above 20 years in varieties A and B. Table 3 also showed that the highest starred value for farm experience is 5482 and this further confirmed that the optimum combination for both varieties A and B is above 20 years.

Table 3. Distribution of the Number of stands of Cassava varieties in A and B into the categories of socioeconomic variables.

Variety B		Variety A		
Sex		Male	Female	
		2200	2200	
Male	2949	5149 *	5149 *	
Female	59	2259	2259	
Age (year)		< 25	<25 – 50	> 50
		0	1956	2444
< 25	59	59	2015	2503
25 –50	2625	2625 *	4581 *	5069 *
> 50	324	324	2280	2768
Family size		1 - 5	6 – 10	> 10
		1039	3178	183
1– 5	0	1039	3178	183
6- 10	2831	3890 *	6009 *	3014*
< 10	177	1216	3355	360
Edu Levels		Illiterates	Primary	College
		1328	1396	1696
Illiterates	928	2256	2304	2624
Primary	992	2320	2368	2688
College	1008	2336 *	2384 *	2704 *
Experience		1 – 10	11 – 20	> 20
		611	4 89	3300
1 – 10	531	1142	1020	3831
11 – 20	295	906	784	3295
> 20	2182	2793 *	2671 *	5482 *
Farm size		<3	3 – 5	>5
		1296	1632	1472
< 3	368	1664	2000	1840
3– 5	816	2112	2448	2288
> 5	1824	3120 *	3456 *	3296 *
Farm Income		< 50000	50000 - 100,000	> 100,000
		1296	1568	1536
< 50000	288	1584	1856	1824
50000 - 100,000>	1088	2384	2656	2624
> 100,000	1632	2928*	3200 *	3168 *

Source: Compiled from Table 2.
* Represent the maxima Units for each column.

Another socioeconomic variable investigated was farm size. Table 4 showed that the highest starred value under farm size is 5408, which occurred under less than 3 hectares in variety C and 3 -5 hectares in both varieties A and B. Further investigation into Table 3 showed that the highest starred value is 3456 in which the optimum combination occured under above 5 hectares in variety B and 3 -5 hectares in variety A.

The last variable investigated was farm income. Table 4 showed that the highest starred value is 4784 which is under less than ₦50,000 farm income group for variety C and ₦50,000 – ₦100,000 for both varieties A and B. Table 3 further revealed that the highest starred value under farm income is 3200, which is above ₦100,000 for variety B and ₦50,000 – ₦100,000 for variety A.

In Table 5, the result of the influence of the various socioeconomic variables on variety A showed that the use of variety A is equally popular to the two sexes (male and female), more popular among the age group cof above 50 years and family size of 6 – 10 persons. Other socioeconomic variables showed that variety A is more popular among the college-graduate educational status, farm experience of above 20 years, farm size of 3 -5 hectares and farm income group of ₦50,000 – ₦ 100,000.

The level of use of variety B among the various categories of socioeconomic variables showed that variety B is more popular among the male cassava farmers, age group of 25 – 50 years and household size of 6 -10 persons. Other categories of socioeconomics variables revealed that variety B is more popular among the college-graduate, farming experience of above 20 years, farm size of above ₦100, 000. Table 5 showed that variety C which is the local variety of cassava is more in use by male cassava farmers, age group of 25 – 50 years and family size of 6 – 10 persons. Local cassava variety (variety C) is more popular among the illiterate farmers, farmers with farm experience of 1 – 10 years, farm size of less than 3 hectares and farm income of less than ₦50, 000

Ibitoye and Mundi (2004), observed that there is a tendency for the farmers who adopt new innovation to have certain characteristics. They tend to have a higher educational level and a higher income. They further stretched that such farmers are more cosmopolitan and trend setters. In a similar study Ibitoye (2010), also observed that the farmers who adopt the use of downy mildew variety of maize belong to farmer of farm size above 5 hectares, college-graduate educational level and farm income of above ₦100,000. This general observation is evidence in this research work.

The general review of the socioeconomic variables further revealed that male farmers prevailed over their female counterparts in the production of cassava in the state. Male cassava farmers contributed about 79 percent of the total production. This finding agrees with Akinsanmi and Doppler (2005), who reported that more men were found in farming than women in Nigeria. Findings of this research with respect to sex may be attributed to the fact that

cassava production operations are tedious. Therefore, most women preferred cassava processing and marketing to cassava production.

Table 4. Matching of the maximum units of the varieties A and B against variety C

Variables C		Variety A and B		
Sex		Male	Female	
		5149	5149	
Male	3120	8269 *	8269*	
Female	0	5149	5149	
Age (yrs)		< 25	25 - 50	> 50
		2625		5069
< 25	0	2625	4581	5069
25 – 50	2411	5036	4581	7480 *
> 50	709	3334	6992	5778
Family Size		1 - 5	5290	> 10
		3870	6 – 10	3014
1 – 5	0	3870	6009	3014
6 - 10	2884	6754	6009	5898
> 10	236	4106	8893 *	3250
EducationLevel		Illiterates	6245	Colleg27
		2336	Primar	04
Illiterates	1712	4048	y	4416 *
primary school	928	3264	2384	3632
college –graduate	480	2826	4096	3184
Farm Experience		1 - 10	3312	> 20
		2793	2864	5482
1 – 10	1996	4589	11 – 20	7278 *
11- 20	993	3786	2671	6475
> 20	331	3124	4467	5813
Farm Size (Ha)		< 3	3664	> 5
		3120	3002	3296
< 3	1952	5072	3 - 5	5248
3 – 5	1168	4288	3456	4464
> 5	0	3120	5408 *	3296
Farm Income (N)		< 50,000	4624	100,000
			3456	3168
		2928	50.000	4752
< 50,000	1584	4512	–	4608
50,000 – 100,000	1440	4368	100,00	3264
>100,000	96	3024	0	
			3200	
			4784 *	
			4640	
			3296	

Source: compiled from Table 2 and 3. * Represent the maxima unit of cassava stands for all the columns.

Table 5. Maximum cassava stands in each variety based on the socioeconomic variables.

Varieties of cassava	Socio-economic variable	No of Units Planted
Sex		
Variety A	Both Sexes	2200
Variety B	Male	2949
Variety C	Female	3120
Age (Yrs)		
Variety A	> 50	2444
Variety B	25 – 50	2625
Variety C	25 - 50	2411
Family Size		
Variety A	6 - 10	3178
Variety B	6 - 10	2831
Variety C	6 - 10	2884
Educational status		1696
Variety A	College	1088
Variety B	College	1712
Variety c	Illiterates	
Farm Experience		
Variety A	Above 20	33000
Variety B	Above 20	2182
Variety C	1 - 10	1796
Farm Size (Ha)		
Variety A	3 - 5	1632
Variety B	> 5	1824
Variety C	< 3	1952
Farm income		
Variety A	50,000 – 100,	1568
Variety B	000	1632
Variety C	>100,000	1584
	<50,000	

Source: Compiled from Tables 2, 3 and 4

The age analysis of the respondents showed that about 67 percent of them falls below the age of 50years. This could be explained to mean that most of the respondents are still energetic to carry on with cassava farming. It is common knowledge that farming in developing countries like Nigeria is manually done and as such requires a lot of labour. This finding is in agreement with the findings of Ibitoye (2010), who reported that average age of farmers in Kogi state is 45years. Ogundari and Ojo (2006) also asserted that only those farmers within the productive age group of 20-45 years are likely to posses the necessary strength to carry out farming activities.

Household size of most respondents ranged from 6-10 members (87 percent). The mean household size was about seven members per household. The household size recorded for the area is high but lower than what is obtainable in the Northern part of Nigeria. The average size for the entire Northern Nigeria according to Obinne (1991) is 13 members per household. The high range of

household size recorded is generally expected to serve as source of cheap labour on the farm.

The educational status of the respondents showed that only about 31 percent of them had above primary education, it is thus obvious that the educational standard of the respondents are generally low, but not as low as other region in Nigeria, especially the Northern and South eastern Nigeria (Akinsanmi and Doppler, 2005). This relatively higher educational status may encourage acceptance of innovation like improved cassava varieties which may raise farm income and productivity.

About 69 percent of the respondents had farm sizes of less than five hectares. The mean farm size for the area is 2.4 hectares. The findings conform to the result of a study carried out in south-eastern Nigeria (Agwu and Anyaeche, 2004), where the mean hectares cultivated per farmer was found to be about 2.5 hectares. Similarly, about 69 percent of the farmers earned less than ₦100,000 per annum. This implies that, cassava farming in the area of study is still at the subsistence level. According to Nwakor et al (2007), over 90 percent of the country's food supply comes from the agricultural population who are smallholder farmers. Agwu and Anyaeche (2007) associated low income with poverty and this implies that majority of the cassava growers in the area are poor. The low income and other factors like low education and small farm size can negatively affect the use of improved cassava varieties in the area.

4. Conclusion and Recommendations

Nigeria is blessed with abundant natural and human resources to make her a leading producer of many types of crops and animal in the world. However, Nigerian Agricultural sector is not doing well to the extent that the country depends on the importation of certain food items like rice, maize, wheat and meat to bridge the gap between demand and the domestic supply.

Cassava enterprise is not left out of the poor performance of the agricultural sector in Nigeria. The country is ranked 6th in the world based on the volume of output of cassava, while she is ranked 8th in terms of yield (tons per hectare). Cassava is a cheap and reliable source of food for more than 700 million people in the developing world. Cassava production will continue to dominate agricultural production in Kogi State because of its contribution to the economy of Nigeria. However, farmers in Kogi State of Nigeria are not adequately reaping the benefits of research findings on cassava production partly because of the influence of some socioeconomic variables like educational status, income level and farm size. It can be concluded generally from this study that socioeconomic variables influenced the choice of the different varieties of cassava in the area of study.

Cassava is a cheap and reliable source of food for more than 700million people in the developing world. Cassava production will continue to dominate agricultural production in Kogi State because of its contribution to the economy of Nigeria. It can also be concluded from this study that socioeconomic variables influenced the choice of the different varieties of cassava in the area of study.

The following recommendations are made to increase the use of improved cassava variety in the state.

The use of local cassava variety is mostly associated with farmers with small farm size and low farm income, it is therefore strongly recommended that governments at both state and federal levels should put in place credit facilities for small scale farmers.

The use of local cassava variety is also influenced by the level of education and farm experience. Both illiterates and in-experience cassava farmers still depend on local cassava variety for their planting materials. Governments through their agricultural agencies like Agricultural Development Projects should embark on enlightenment campaign on the use of improved cassava varieties.

Governments at the state and federal levels should try to liaise with IITA and NRCRI who are the sole breeder of TMS and NS improved cassava varieties respectively to produce and distribute cassava cuttings to the farmers at prices highly subsidized by governments.

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