

Accessibility to International Fund for Agricultural Development-Value Chain Development Programme Support Services among Rice Farmers in Ogun State, Nigeria

¹*Alabi A. F. and ¹Akinrinde O.M.

¹Department of Agricultural Technology, Oyo State College of Agriculture and Technology, Igbo Ora, Oyo State, Nigeria

Correspondence Author: aaieronke2009@gmail.com

Abstract

Access to support services plays a crucial role in farmers' decision to utilise the services and non-access to support services limits the extent of utilising such services. Therefore, accessibility to International Fund for Agricultural Development-Value Chain Development Programme, (IFAD-VCDP) support services among rice farmers in Yewa North Local Government Area of Ogun State was assessed in this study. Multi-stage sampling technique was adopted to sample 181 rice farmers. Data were analysed using descriptive and inferential statistics at $p = 0.05$. Result reveals that more than half (50.8%) of the respondents were between the ages of 31-40years with mean age of 36 years. A little above average of the respondents (53.6%) of the respondents grew both rice variety and earned annual income below N300,000 (52.5%). Respondents' main sources of credits were mostly from cooperative/bank (46.4%), off takers (22.7%) and credit from IFAD-VCDP (18.8%). Respondents had high level of accessibility to IFAD-VCDP support services (61.9%). High rigour in procurement of credit (0.791), untimely disbursement or delivery of inputs (0.653) and unavailability of adequate credit (0.546) constituted the major constraints in accessing most IFAD support services. A significant relationship existed between sex ($\chi^2=13.569$, $p<0.05$), marital status ($\chi^2= 195.723$, $p<0.005$), annual income ($\chi^2 = 10.908$, $p< 0.05$), source of fund ($\chi^2= 83.462$, $p<0.05$), cultivation type ($\chi^2 = 36.769$, $p<0.05$), household size ($r= 0.340^{**}$, $p<0.05$), years of experience ($r= 0.479^{**}$, $p<0.05$) and respondents' access to IFAD-VCDP support services. It is recommended that more effort should be made by IFAD-VCDP to make sure some support services that were least accessible i.e irrigation facilities, threshers, among others be made accessible to farmers.

Keywords: IFAD, accessibility, guaranteed market, flash bottom boiler.

Introduction

In Nigeria, small scale farmers make up 85 percent of the farming population which represent 14 million households (SAHEL, 2017). The implication is that production is largely at subsistence level. Knowing how much indigenous people rely on farm produce for daily consumption, and efforts put into production, marketing and distribution; farmers' livelihood has not been improved evenly and therefore, some still

live below the poverty line and with little food to even sustain the family. Rice is a staple food in several African nations and constitutes a bigger portion of the diet on a regular basis (Merem et al., 2017). In Nigeria, rice has consumption per capita of 32kg indicating 4.7% increase in the past decade making the total consumption to be 6.4 million tonnes in 2017 as against 3.7 million tonnes produced per year (Erhie et al., 2018). In Nigeria, research has revealed that rice is generally processed by small-scale farmers who lack adequate financing, infrastructural support, institutional linkage, latest technologies to boost production and little or no idea about the best practices in farming. Therefore, one of the major problems of agriculture in Nigeria is insufficient or lack of adequate support services to small scale farmers.

In an effort to further boost agricultural production of Nigerian farmers, the Federal Ministry of Agriculture and Rural Development (FMARD) (2016) asserted that the country ought to partner with private investors across farmer groups and companies in order to develop end to end value chain solutions. These chains will receive facilitated government support as they make deep commitments to engaging new generation of farmers improve supply of specialized fertilizers and protection chemicals, as well as wider scale use of high yielding seeds. A value chain is a set of linked activities that work to add value to a product: consisting of actors and actions that improve products while linking the commodity producers to the processors and markets (Norton, 2014). The Value Chain Development Programme is a development initiative which is an approach to tackle the challenges faced by smallholder farmers. The six-year Programme is aimed at improving cassava and rice value chains in six states, namely: Anambra, Benue, Ebonyi, Niger, Ogun and Taraba by proffering solutions to low productivity, limited access to productive assets and inputs, paucity of opportunities for value addition, inadequate support services such as extension services and research, inability to access rural financial services, inadequate market and rural infrastructure. The International Fund for Agricultural Development/Federal Government of Nigeria adopted the value chain approach to enhance productivity, promote agro-processing, access to markets and opportunities to facilitate improved engagement of the private sector and farmers' organizations (Ityokumbul, 2020).

Support services is more or less like a raw material that should not be neglected by any country that intends to have productivity growth, food security, and structural transformation. The amount of relevant support services at the disposal of farmers will determine their productivity and survival. Support services are a vital commodity every small scale farmers need and its use is largely determined by its availability and accessibility. However, availability of support services does not necessarily translate to its accessibility, because the support services may be available but access to it is prevented for one reason or the other. Many rural households in Nigeria cannot afford to purchase necessary farm inputs or implement which will bring about increase in income and productivity and proactively affect the socioeconomic wellbeing of household positively (Ukoha et al., 2007). Literature has shown that smallholder farmers, who account for 80% of the agricultural production in Nigeria have low income and limited access to credit facilities, other support services and are at higher risk of

economic inequality, and generally represent the poorest segment of the population in developing countries. To halt the spread of this, access to adequate support services by farmers is of great importance. It is in this regard that this study investigated the level of accessibility to International Fund for Agricultural Development-Value Chain Development Programme support services among rice farmers in Yewa North Local Government Area of Ogun State and answered the following research objectives: describe the socio-economic characteristics of the respondents; examine the level of accessibility of support services to rice farmers; identify the constraints affecting farmers access to IFAD-VCDP support services in the study area.

Methodology

The study was carried out in Yewa- North, Ogun State with its headquarters in the town of Ayetoro. Yewa-North has 11 wards namely: Ayetoro ward 1, Ayetoro ward 11, Idofi Ward, Sunwa ward, Ijoun ward, Eggua ward, Ohunbe ward, Igbogila/Ibese Ward, Joga-Orile/Ibooro Ward, Ebute ward and Imasai ward. The unit of analysis were farmers registered as IFAD/VCDP rice farmers in Yewa North LGA, Ogun State. Multi-stage sampling technique was adopted in this study. The first stage involved purposive selection of all the communities in the local government where IFAD-VCDP was implemented in Yewa-North LGA: Eggua, Alapako, Igbogila and Sanwojo. A list of rice farmers groups was generated from the IFAD/VCDP and from the ADP office at the local government area. The list presented 916 rice farmers in Yewa North local government area from De-royale¹, De-royale 2, Agbedola, Agbedara, Oreofe, Iselogun-ise, Excellent and Egbeyemi rice farmers group with 112, 132, 141, 132, 127, 147 and 125 respectively. The second stage involved random selection of 20% of the respondents from each farmers group in the LGA to give 181 registered IFAD-VCDP rice farmers. Data was collected through the use of structured questionnaire and interview guide. Variables assessed include respondents' socioeconomic characteristics, accessibility to IFAD-VCDP support service and constraints. A list of 38 items on accessibility to IFAD-VCDP support services was presented to the respondents. Information on IFAD support services were categorized into six which were farm input services, mechanization services, good agricultural practices training, credit/guaranteed market, rural infrastructure and institutional linkage/extension service. Respondents were asked to indicate how often they access the categorized support services for their use on a three point scale of always, sometimes and never and scores of 2, 1 and 0 were assigned respectively. A list of seven items on constraints affecting farmers access to IFAD-VCDP support services was presented using a three-point scale of not a constraint, mild constraint and severe constraints. Scores of 0, 1 and 2 were assigned, respectively. Data were analyzed using descriptive statistics such as frequency counts, percentages, mean scores, standard deviation while inferential statistics (chi-square and Pearson Product Moment Correlation was used to analyse study hypothesis.

Results and Discussion

Socioeconomic Characteristics of the Respondents

Table 1: Distribution of Respondents based on Socio-economic Characteristics (n=181)

Variables	Frequencies	Percentages	Mean	Standard deviation
Age				
>30	30	16.6	36.13	6.47
21-40	92	50.8		
41-50	46	25.4		
Above 50	13	7.2		
Sex				
Male	143	79.0		
Female	38	21.0		
Marital status				
Single	29	16.0		
Married	141	77.9		
Divorced	4	2.2		
Widowed	7	3.9		
Educational level				
No formal education	7	3.9		
Primary education	51	28.1		
Secondary education	102	56.4		
Tertiary education	21	11.6		
Household size				
1 -5	31	17.1	8.34	5.165
6 -10	137	75.7		
11 -15	9	5.0		
Above 15	4	2.2		
Annual income				
Below 300,000	95	52.5		
301,000-600,000	73	40.3		
601,000 -900,000	9	5.0		
Above 900,000	4	2.2		
Years of farming experience				
1 -5	29	16.0	7.12	3.062
6-10	121	66.9		
11-15	24	13.2		
Above 15	7	3.9		

Source: Field survey, 2022

Table 1: Distribution of Respondents based on Socio-economic Characteristics (n=181) (Cont'd)

Variables	Frequencies	Percentages	Mean	Standard deviation
Rice farm size (ha)				
<2	98	54.1		
3-5	63	34.8		
6-8	11	6.1		
>8	9	5.0		
Cultivation type				
Upland rice	79	43.6		
Lowland rice	62	34.3		
Both	40	22.1		
Variety of rice grown				
Ofada	48	26.5		
Faro	36	19.9		
Both	97	53.6		
Source of fund				
Personal savings	10	5.5		
Family and friends	12	6.6		
Cooperative / Bank	84	46.4		
Offtakers	41	22.7		
Credit from IFAD	34	18.8		
Off-farm income				
Yes	121	66.9		
No	60	3.1		

Source: Field survey, 2022

Table 1 shows that 50.8% of the respondents were between the ages of 31-40years with mean age of 36.13 and standard deviation of 6.47. This implies that the respondents were in their active and productive age. This finding agrees with the findings of Adi et.al. (2020) who reported that the youths that were actively involved in the VCDP programme were between 30-39 years. Most of the farmers were male (79.0%) while (21.0%) were female. This indicates that men are more involved in rice production activities. This supports the study of Akanbi et.al. (2019) who reported that majority of their respondents were male. 77.9% of the respondents were married while 16.0% of the respondents were single. This finding is in agreement with that of Nkechi et al. (2020) who submitted that the greater proportion of rice farmers were married.

The distribution of educational level shows that 96.1% of the respondents had one form of formal education or the other, ranging from primary through tertiary. Thus, it is expected that the introduction of new technologies and IFAD-VCDP activities in the area will receive maximal acceptance and adaptation due to literacy. Ojo, Yusuf and Sennuga (2022) revealed that education influences people's awareness, perception, reception, adoption of innovations, and their ability to view and comprehend new ways of doing things to improve their living condition. The distribution of household size shows that respondents had an average household size of 8 members. This corroborates the findings of Oloyede et al. (2020) whose respondents had mean

household size of 7 persons per household which is a characteristic feature of an agrarian settlement, as large household size guarantees free and cheap labour for farm work but is contrary to the findings of Adagba (2014) who reported that respondents in the study area depend on readily available and cheap family labour as a result of large household size.

The result on average annual income of the respondents shows a little above average (52.5%) of the respondents earned below N300,000 while 40.3% earned between N301,000 to 600.000 annually. This implies that the respondents will have significant savings by end of every year as a result of IFAD-VCDP programme. The mean value of years of farming experience is 7.12 years and the standard deviation is 3.062. Farming experience is important to farmers' efficiency, successful succession planning and even for the competitiveness of the nation's farmers. This result agrees with the findings of Nkechi et al. (2020) who revealed that majority of the rice farmers had farming experience between 6-10 years. Farm size distribution shows that 54.1% of the respondents cultivated land sizes that were less than two hectares. 34.8% of them cultivated land size of 3-5 hectares while a smaller percentage of the farmers (5.0%) cultivated rice crop on land areas that were greater than 8 hectares. This finding agrees with Lowder *et al.* (2016) who reported that the cultivated land areas of farmers were generally of small sizes. About 43.6% of the respondents engaged in cultivation of upland rice while 34.3% of them engaged in lowland rice.

This finding agrees with Oloyede et al. (2020) who reported that majority of the rice farmers practised the upland production system which might be due to nature of production in lowland system since it is labour intensive and hence, expensive. A little above average of the respondents (53.6%) grew both rice variety (Ofada and Faro 44). This could be because ofada and Faro rice variety have market acceptance in the study area. Respondents' main sources of credits were mostly from cooperative (38.1%) off-takers (22.7%) and credit from IFAD-VCDP (18.8%). This finding disagrees with Nkechi et al. (2020) who reported that 80% of the farmers in the study area finance their production themselves, which implies that they have never applied for loan or obtained loans or grants to finance their production. Majority (66.9%) of the respondents were engaged in one form of non-farming activities or the other while 33.1% were predominantly into farming. This indicates high level of economic diversification among the farmers which may likely increase their purchasing power. This also implies that most of the farmers have many responsibilities or the other due to their large family size, thereby making them likely in need of income from other sources to meet up with their financial obligations.

Accessibility to IFAD-VCDP Support Services

Table 2 shows the respondents' accessibility to IFAD-VCDP support services in the study area. Information on IFAD-VCDP support services were categorized into six: farm input services, mechanization services, good agricultural practices training, credit/guaranteed market, rural infrastructure and institutional linkage/extension service. Based on the mean of variables reported on accessibility to IFAD-VCDP

support services on Table 2 below, it reveals that access to IFAD support services were more on ADP/ Extension agents (1.031), herbicides(1.017), pesticides (0.986), fertilizers and GAP training on land preparation(0.983), GAP training on fertilizer application (0.971), certified seeds, GAP training on proper harvesting and linkage with seed producers(0.952), GAP training on seed planting(0.919), jute bags (0.891), GAP training on weed control(0.864), GAP training on insect/pest control (0.845), GAP training on use of standard weights and measures(0.821), and GAP training on drying(0.809). The least accessed support services were irrigation facilities (0.315), threshers (0.318), power tiller (0.304), flash bottom boiler and mechanical harvester (0.220) and market/ feeder roads (0.217).

Table 2: Distribution of respondents based on Accessibility to IFAD-VCDP Support Services (n=181)

IFAD Support Services	Always	Sometimes	Never	Weighted mean score	Rank
Farm input services					
Certified seeds	83.4	5.5	11.1	0.952	7 th
Fertilizer	85.1	7.7	7.2	0.983	4 th
Herbicides	89.0	6.1	5.0	1.017	2 nd
Pesticides	83.4	11.6	5.0	0.996	3 rd
Jute bags	77.3	6.6	16.0	0.891	11 th
Mechanization services					
Tractor	30.9	11.6	57.5	0.406	30 th
Plough	29.3	16.0	54.7	0.412	29 th
Sprayer	34.8	25.4	39.8	0.525	24 th
Thresher	22.7	12.2	65.1	0.318	33 rd
Power tiller	22.0	11.1	66.9	0.304	35 th
Mechanical harvester	12.2	15.5	72.3	0.220	36 th
Bird scaring equipment	11.1	38.6	50.3	0.336	31 st
Flash bottom boiler	17.7	4.4	77.9	0.219	37 th
Good Agricultural Practices (GAPs) Training/ Capacity Development					
Land preparation	88.4	1.1	10.5	0.983	4 th
Seed planting	79.6	7.2	13.2	0.919	10 th
Rice transplanting	46.5	9.9	43.6	0.613	20 th
Fertilizer application	84.0	7.7	8.3	0.971	6 th
Weed control	61.9	32.6	5.5	0.864	12 th
Insect /pest control	65.7	21.6	12.7	0.845	13 th
Proper harvesting	77.3	17.7	5.0	0.952	7 th
Drying	55.0	34.8	9.4	0.809	15 th
Storage practices	43.6	45.3	11.1	0.732	17 th
Use of standard weight / measures	65.2	18.2	16.0	0.821	14 th
Seed production	38.7	9.4	51.9	0.479	28 th
Packaging and branding	23.8	43.6	32.0	0.504	25 th
Book keeping	34.3	31.4	34.3	0.552	23 rd
Credit/ Guaranteed market					
Credit from IFAD	34.8	20.4	44.8	0.497	26 th
Fair Price For Paddy	40.9	28.2	30.9	0.608	21 st
Timely off take of paddy	45.3	27.1	27.6	0.650	19 th
Adequate market information	55.8	24.8	19.3	0.754	16 th
Rural infrastructure					
Irrigation facilities	22.7	11.6	65.7	0.315	34 th
Storage facilities	39.2	11.6	49.2	0.497	26 th
Processing facilities	49.7	23.2	27.1	0.677	18 th
Market / feeder roads	11.6	16.0	72.4	0.217	38 th
Institutional linkage/ Extension service					
Agric Dev Prog/ Extension agents	88.4	9.9	1.7	1.031	1 st
Seed producers: IITA, AFRICAN RICE, IAR, OLAM	82.9	6.6	10.5	0.952	7 th
Off takers/ buyers	44.8	19.3	35.9	0.601	22 nd
Nigerian Agricultural Insurance Corporation (NAIC)	27.1	6.1	66.9	0.333	32 nd

Source: Field survey, 2022

Table 3: Distribution of respondents based on level of accessibility to IFAD - VCDP support services

Level of accessibility	Frequency	Percentage	Minimum score	Maximum score	Mean	Standard deviation
High	112	61.9	38	76	48.30	8.11
Low	69	38.1				
Total	181	100				

Source: Field survey, 2022

Categorization of level of Accessibility to IFAD Support Services

Result in Table 3 reveals that 38.1% of the respondents had low level of accessibility, while 61.9% had high level of accessibility to IFAD-VCDP support services. This implies that respondents experienced relatively high level of accessibility to IFAD - VCDP support services in the study area and the fact that majority have access to IFAD-VCDP support services means they are aware of major IFAD-VCDP support services. Moreover, accessibility to support services plays a crucial role in the respondents' decision to utilize the services. In many cases, non-access to support services limits the extent of utilising such.

Constraints faced by Respondents in Accessing IFAD-VCDP Support Services

The respondents' constraints to accessing IFAD-VCDP support services were explored, the results in Table 4 show constraints items according to their severity by the respondents. The constraints that were mostly encountered by the respondents were those that border on high rigour in procurement of credit (0.791), untimely disbursement or delivery of inputs (0.653) and unavailability of adequate credit (0.546). This implies that high rigour in procurement of credit, untimely disbursement or delivery of inputs and unavailability of adequate credit, constitute the major constraints in accessing most IFAD-VCDP support services. In line with this finding, Adi et al. (2020) reported persistent farmers/pastoral conflict, corruption, late distribution of farm inputs, delay in payment of counterpart funds by both federal and state government as major problems militating against value chain development programme (VCDP) in their study area.

Table 4: Distribution of respondents based on constraints faced in accessing IFAD-VCDP support services (n=181)

Constraints	Not a constraint %	Mild constraint %	Severe constraint %	Weighted mean score	Rank
Poor training on GAPs	27.3	64.5	8.21	0.447	7 th
Corruption of field staff	38.3	41.5	20.2	0.452	6 th
Unfair price for paddy	18.6	69.9	11.5	0.513	5 th
Untimely disbursement or delivery of input	18.0	46.4	35.9	0.653	2 nd
Shady jobs by tractor operators	23.5	59.6	16.9	0.516	4 th
High rigour in procurement of credit	18.0	20.8	61.2	0.791	1 st
Unavailability of adequate credit	14.2	72.7	13.1	0.546	3 rd

Source: Field survey, 2022

Correlation between Respondents' Socio-economic Characteristic and Accessibility to IFAD -VCDP support services

The result in Table 5 shows that a significant relationship exists between sex ($\chi^2=13.569$, $p<0.05$), marital status ($\chi^2= 195.723$, $p<0.005$), annual income ($\chi^2 = 10.908$, $p< 0.05$), source of fund ($\chi^2= 83.462$, $p<0.05$), cultivation type ($\chi^2 = 36.769$, $p<0.05$) and respondents' access to IFAD-VCDP support services. This implies that the level of respondents' access to IFAD-VCDP support services is influenced by sex, marital status, annual income, source of fund and cultivation type of respondents in the study area. A significant correlation existed between household size ($r= 0.340^{**}$, $p<0.05$), years of experience ($r= 0.479^{**}$, $p<0.05$) and respondents' access to IFAD-VCDP support services. This implies that the respondents' access to IFAD-VCDP support services is due to household size and years of experience and not of age.

Table 5: Correlation Analysis of Respondents' Socio-economic Characteristics and Access to IFAD-VCDP Support Services

Variables	PPMC(r)	χ^2	df	p-value	Decision
Age	-.910	-	-	0.302	NS
Household size	.340**	-	-	0.000	S
Years of experience	0.479**	-	-	0.000	S
Sex	-	13.569	1	0.000	S
Marital status	-	195.723	3	0.000	S
Annual income	-	10.908	2	0.004	S
Source of fund	-	83.462	4	0.000	S
Cultivation type	-	36.769	4	0.000	S

Source: Data analysis, 2022

****Correlation is significant at the 0.01 level (2-tailed) df - degree of freedom, S-significant, NS - Not Significant, χ^2 - Chi- square**

Conclusion and Recommendation

Based on the findings, respondents grew both rice variety; Faro and Ofada rice. They sourced credit mostly from cooperative/bank, off takers and credit from IFAD-VCDP. Respondents had high accessibility to IFAD-VCDP support service. High rigour in procurement of credit, untimely disbursement or delivery of inputs and unavailability of adequate credit constituted the major constraints in accessing most IFAD support services. However, sex, marital status, annual income, source of fund, cultivation type, household size and years of experience drives their accessibility to IFAD /VCDP support service. It is recommended that more effort be made by IFAD/VCPD to make sure some support services that were least accessible (irrigation facilities, threshers, power tiller, flash bottom boiler, mechanical harvester and market/ feeder roads) be made accessible to farmers.

References

- Adagba, M. A. (2014). Socio-economic Characterization of Shea Value Chain in Nigeria. Expanding Export of Sesame Seed and Sheanut/butter through Improved Capacity Building for Public and Private Sectors. Working paper 172: National Export Promotion Council (NEPC) of Nigeria, Pp. 10-11.
- Adi, S.S., Simon, B. P., & Aminu, S. (2020). "Impact of Value Chain Development Programme (VCDP) on the Farmers in Ardo-kola Local Government Area of Taraba State, Nigeria." *IOSR Journal of Agriculture and Veterinary Science* (IOSR-JAVS), 13(3): 08-11
- Akanbi, S.O., Alarape, W. I. & Olatunji, O. S. (2019). Economic Implication of Contract Farming on Small- Scale Rice Farmers in Kwara State, Nigeria. *Agrosearch*, 19(2), 26-40, <https://dx.doi.org/10.4314/agrosh.v9i2.3>
- Erhie, E., Agbeyi, E., Oyaniran, T., Adegunle, E., Iwelumo, M., Oladipo, O. & Akinbiyi A. (2018) Boosting rice production through increased mechanisation. Lagos. Available at: www.pwc.com/ng.
- Federal Ministry of Agriculture and Rural Development (FMARD) (2016). Reports. <https://fmard.gov.ng> (Accessed 15 August, 2019)
- International Fund for Agricultural Development - Value Chain Development Programme IFAD-VCDP (2015). Reports <https://www.ifad.org> (Accessed 20 September, 2019).
- Ityokumbul, V.D. (2020). Effect of Value Chain Development Programme (VCDP) on Income and Food Security of Rice Farmers in Yewa North and Ijebu North East, Ogun State, Nigeria. IFAD Research Report. Centre for Sustainable Development, University of Ibadan, Nigeria
- Lowder, S.K., Skoet, A. & Raney, T. (2016). The Number, Size and Distribution of Farms, Smallholder Farms and Family Farms Worldwide. 87:16- 29 <https://doi.org/10.1016/j.worlddev.2015.10.041>
- Merem E.C., Twumasi, Y. Wesley J, Isokpeh P, Shenge M., Fageir, S., & Crisler M. (2017). Analyzing Rice Production Issues in the Niger State Area of Nigeria's Middle Belt. *Food and Public Health*. 7 (1): 7-22
- Nkechi, U. , Donatus, J. & Uchenwachi, N. (2020). Assessment of the Profitability of Rice Production in Afikpo North L.G.A. *Journal of Agriculture and Ecology Research International*. 21(7): 22-29, Article no.JAERI.59366
- Norton, R. (2014). Agricultural Value Chain: A Game Changer for Smallholders. URL <https://www.devex.com/news/agricultural-value-chain-a-game-changer-for-small-holders-83981>
- Ojo, I. H., Yusuf, H.A. & Sennuga, S. O. (2022). Effect of Training of Women Beekeepers on Production of Beehive Products in Ogun State, Nigeria. *Agrosearch*, 21(1&2), 18-31, <https://dx.doi.org/10.4314/agrosh.v21i1-2.2.18>
- Oloyede, W.O., Muhammad-Lawal, A., Amolegbe, K. B., Olaghere, I. L. & Joseph, I. A (2020). Comparative Analysis of the Profitability of Rice Production Systems in Kwara State, Nigeria. *Agrosearch*, 20(2), 82-101, (2020) <https://dx.doi.org/10.4314/agrosh.v20i2.7>
- SAHEL (2017). Unlocking the Opportunities in the Agricultural Value Chain Being a Paper Presented at a Symposium Organized by the Lagos Chamber of Commerce and Industry on October 24, 2017. Available at <http://lagoschamber.com>.
- Ukoha, O.O Mejeha, R.O. & Nte, I. N. (2007). Determinants of Farmers Welfare in Ebonyi State Nigeria. *Pakistan Journal of Social Science* 4(3): 351-354