

Disposition of Secondary Students towards Charcoal Production in Ibarapa North Local Government Area of Oyo State

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Abstract

The study assessed the disposition of secondary school student towards charcoal production. A multistage sampling technique was used to select 225 respondents from six secondary schools in the area. Information was elicited from the respondents with the aid of a questionnaire, information collected was analyzed using descriptive (Frequency, percentages, tables and mean) and inferential (chi-square and T-test) statistical tool. The result of the study shows that there is no gender bias in the involvement in the charcoal activities as 50.7% are males, with mean age of 17 years and household size of 8. The result also revealed that 68% of the students are involved with an average period of 4 years while 35% reported their parents are also involved and make an average of ₦8, 754 on monthly basis. On the activities they are involved in the findings revealed that they are involved in different activities with transportation being the major one while the need to make more money (49.4%), being common occupation in the community (48%) and the prestige associated with it (41.3%) as the major influencing factors of their involvement. Their disposition was largely indifferent (88%) as revealed by the study as many of them are involved just to get the benefit without considering the effect on them. The result of the T-test (t-value 4.117, p=0.000 at P< 0.005) reveals significant difference in the disposition of those involved and those not involved while the chi-square analysis also showed significant relationship between sex($\chi^2 = 29.874$, p = 0.000), household size($\chi^2 = 17.472$, p = 0.002) and parental involvement ($\chi^2 = 8.855$, p = 0.012) at p < 0.05. The study therefore concluded that the students are involved and are indifferent in their disposition to charcoal production and recommend that there is a need for proper orientation of the student in relationship to their involvement while inculcating teaching on environmental sustainability.

Keywords: Charcoal, Youth, Disposition, Oyo state, Ibarapa and Involvement

INTRODUCTION

Charcoal is a major source for cooking energy in most African countries, for which demand from the burgeoning human population has always outstripped the supply of wood from the forest and woodland (Okello, et al, 2000). Environmental sustainability is one of the key targets in the millennium development goals. It is becoming very imperative to establish a nexus between escalating population, reduction in agricultural production and rapid increase of environmental degradation. Deforestation, particularly in forest belt has been one of the factors fueling climate change and its appendages such as; excessive heat occasioned by the depletion of ozone layer, flooding and drastic decline in agricultural productivity (Ajiboye, 2002).

Forest which the southern area of Nigeria contains has more non timber resources than other forest product, based on this the forest serves as a strategic source of food and other products for man (Ladipo, 2000). He also reported that the extraction of forest is an old enterprise in forest areas, with the extraction of both wood and non-wood product which serve as a major source of living for forest and rural people who live almost entirely on the forests and their products. These rural people have substantial indigenous knowledge on the quantities, utilisation and processes of production and the forest resources.

Charcoal is one of the major products of the forest. Its production is a key factor of environmental degradation in that it takes decades before regeneration of forest could be achieved. Man has been adjudged as the identified enemy of environmental development due to his activities to meet his immediate or current needs, not minding the associated monumental effects of his effort on the environment.

Olujide,(2008) viewed youth as young people that constitute a sizeable chunk of Nigeria's population on which the burden of nation building falls and as such seen as the veritable tools and vital source of man power needed for national development. These youths are regarded as the leaders of tomorrow, therefore inculcating the right attitude in them guarantees an enduring and sustainable future. Care must be taken in the selection of activities they involved in so as to prevent catastrophic events traceable to the failure to scrutinizing and monitoring them particularly at their formative stage which have tremendous effect on the national economy and the people themselves. National development could be achieved through the development of the youth especially at the school ages. Musa and Usman (2013) submitted that youth provide the needed manpower for the social economic development of the society. In the rural sector, youths provide opportunity for generating farming entrepreneurs and other rural professions. In addition, the youth enjoy certain life experiences which can be considered advantageous. These include a greater frequency of interaction with family, and hence less emotional

problems.

The destruction of ecosystem calls for serious concern. Tropical forests are disappearing fast, while the number of people depending on them grows steadily. As over one billion people live on forest resources, there is fear that this dependency can lead to a poverty trap in which people never increase their incomes above basic level. (Jacob, 1997). The vehicle for this shift has been the concept of sustainable development which has the potency to overcome the conflict between environmental protection and economic growth. Involving youth will ensure the sustainability of the desired change. It accepts that protecting the environment requires fundamental change in the direction of economic progress and the institutions of government policy. Developing countries need to wake up and address the issue of environment through participatory approach involving people in the neighborhood of the forest and woodlands and governmental agencies saddled with the responsibility of environmental protection. In the words of Pearce et al ,(1990), he suggested that natural capital stock should only be destroyed if the benefits of doing so are very large or if the social costs of conservation are unacceptably large. It is against this background that this study with the following objectives was conducted;

1. Describe the personal characteristics of senior secondary students in the study area.
2. Identify those activities in which the respondents are involved in relation to charcoal production.
3. Identify the factors that influence their involvement in charcoal production.
4. Determine the respondents disposition towards charcoal production.

While the following hypothetical statement were tested in their null forms

5. There is no significant difference in the disposition of those involved and those who are not involved in charcoal activities.
6. The personal characteristics of the respondents do not have any significant relationship with their disposition.

METHODOLOGY

The study was conducted in Ibarapa North Local Government area of Oyo State, Nigeria. It was created in 1996 with an area of 1,218km² and population of 101,092 as at 2006 (National Bureau of Statistics, 2006) . The study area is prominently an agrarian community with high presence of charcoal production activities. The area was purposively selected for the study because of the prominence of charcoal production activities in the area. Its headquarter is in the town of Ayete. Other notable towns in the Local Government are Tapa and Igangan.

Multistage sampling technique was employed to select 225 respondents. There are twelve secondary schools in the local government. Fifty percent of the total number of school was randomly selected at the first stage making a total of six schools. From each of the school selected from the first stage above, 75 students were equally selected to form the second stage while the third stage consist of purposive and conveniently selection of senior secondary class 2 because of their availability as at the time of the study. Data was collected with the aid of well structured questionnaire which was divided into sections to measure the set objectives. Descriptive statistical tools like frequency count, percentages, tables and mean were used for data description, while chi square and the T-test inferential tools were used for testing the set hypothesis.

Independent variables, such as personal characteristics of the respondent which include age, household size, and duration of residency were collected at interval level while others were collected at nominal level. On the activities and factors which influence, a list was generated and they were asked to tick those which were appropriate. For the dependent variable "Disposition" was measured using a 36 item 5-point likert scale. For positive statement, Strongly agree = 5, Agree = 4, Undecided = 3, Disagree = 2 and 1= Strongly disagree while it was reversed for negative statements. The expected maximum score was 180 while the minimum score was 36. This was later categorized as 36 -84 as Unfavourable, 85 - 132 as Indifferent and 133-180 as Favourable Disposition.

RESULT AND DISCUSSION

Personal Characteristics

The result of this study reveals that 50.7% of the selected students are males while the remaining 49.3% are females. This shows that both gender are involved and the activity is not gender biased. This may be attributed to the different activities carried out as the females are more involved in marketing activities. On the parental occupation, the finding of the study shows that the respondent father are involved in farming (38.7) and trading (34.7%) while 48% of the mothers are traders. This finding still reflect that rural communities are still engaged in agricultural and trading activities. Table 1 reveals that majority (70.7%) of the students are between 16 and 20 years with a mean age of 17 years. This means that student in the rural areas are relatively older than the urban counterpart. The average household size in the area is 8 which reflect a large family household with about 60% also within the range of 6 and 10 household members. This is in line with the position of Seriki, 2013 who reported that rural household have large family size, as the members of the household supply the bulk of labour for their livelihood activities. Further revelation shows that 83% are native of the area with 56% of them having

spent between 16 -20 years in the area. This shows that many of them were born in the study area and have to terms with such activities. This long years of residency would have positive effect on their socialization, disposition which therefore influence their involvement. Also, many of them would have been trained informally as it is the common occupation in the area.

Table 1; Distribution Showing the Personal Characteristics of the Respondents

Variable	Frequency (n=225)	Percentage
Sex		
Male	114	50.7
Female	111	49.3
Father's occupation		
Farming	87	38.7
Artisans	54	24.0
Civil servant	06	02.7
Trading	78	34.7
Mother's occupation		
Farming	63	28.0
Trading	108	48.0
Artisans	09	04.0
Civil servant	45	20.0
Indigene		
Native	186	82.7
No-native	39	17.3
Age (Years)	Mean (17)	
11 - 15	52	25.3
16 - 20	159	70.7
21 - 25	09	04.0
Duration of residency in the area	Mean = 14 years	
1 - 5	30	13.3
6 - 10	18	08.0
11 - 15	48	21.3
16 - 20	126	56.0
21 - 25	03	01.3
Household size	Mean = 8	
1 - 5	60	26.7
6 - 10	129	57.3
11 - 15	36	16.0

Source; field survey 2013.

Involvement in charcoal production activities

In identifying the activities they are involved in, 68% of the respondents reported that they are involved in charcoal production activities. This reflects that many of the students are involved in these activities for one or more reasons. Furthermore, 34.7% reported that their parents are involved in charcoal production. This implies that parental involvement may account for the ward involvement. On further analysis, the result revealed that 84.3% of the students have been involved in charcoal production activities for less than 5 years. This result is also corroborated by the mean year of involvement (4 years). This implies that many of them are relatively new in the process, got involved when they got into secondary school and did not start from their childhood. On the amount realized, table 2 shows that the amount realized from their involvement on a monthly basis range between 1000 and 30,000 with an average of 8,754 while many (66.7%) earn less than 5,000 monthly. This implies that they are paid for the activities they do and the amount realized is just to supplement whatever they get from their parent or in order to make living for them. Although, the amount realize was not compared to their hours of involvement and level of involvement, the authors are of the opinion that they are not well paid as they carry out more tedious activities.

Table 2; Distribution of the Involvement of the Respondents in Charcoal Production Activities

Variables	Frequency	Percentage
Involvement in charcoal production		
Yes	153	68
No	72	32
Parental involvement		
Yes	78	34.7
No	147	65.3
Duration of been involved in charcoal production activities	Mean = 4 yrs	
1-5	129	84.3
6-10	12	07.9
11-15	12	07.9
Amount realized on monthly basis from charcoal activities(N)	Mean = ₦ 8,754.90k	
Less than 5,000	102	66.2
5,001 – 10,000	12	07.8
10,001 – 15,000	06	03.9
15,001 – 20,000	09	05.9
Above 20,000	21	13.7

Source; field survey 2013

For the activities they are involved in, Ogunsanwo, Aiyelaja and uzo (2007) presented a chart of activities involved in charcoal production for this study the chart was expanded but activities such as collection fuel wood, cutting and sorting, drying of wood, stacking and arranging of woods were categorized as On-farm activities while igniting the stock with fire, quenching of fire by stamping and conditioning of charcoal from the forest and wood burning activities. figure 1 shows that on-farm activities and packing are the major activities the student are involved in.

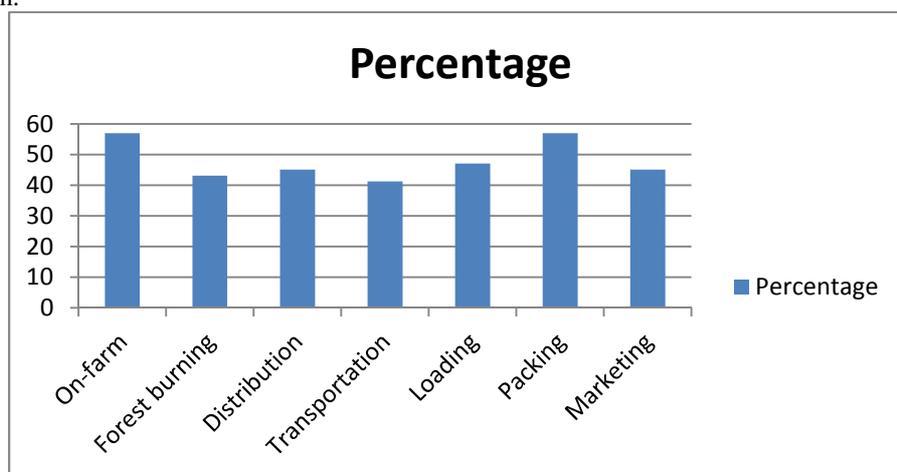


Figure 1; chart of the charcoal production activities involved in by the students

On their frequency of involvement in each activity, the result shows that transportation has the highest mean value of 1.67. this implies that transportation of the charcoal either by head, bus, vehicle, wheel barrow is done more often while the on-farm are less carried out in terms of the frequency. This shows that the student are not always involved in the actual production process but are involved in many other support services like distribution, transportation, loading and marketing. This may be attributed to the level of expertise required and the risk involved.

Table 3; Frequency of Involvement in the Activities They Are Involved In

Activities	Occasionally		Always		Mean	Rank
	Freq	%	Freq	%		
On-farm (n = 87)	57	65.5	30	34.5	1.34	7 th
Forest burning (n = 66)	39	59.1	27	40.9	1.41	6 th
Distribution (n = 69)	33	47.8	36	52.8	1.52	2 nd
Transportation (n = 63)	21	33.3	42	66.7	1.67	1 st
Loading (n = 72)	39	54.2	33	45.8	1.46	5 th
Packing (n = 87)	42	48.3	45	51.7	1.52	2 nd
Marketing (n = 69)	33	47.8	36	52.2	1.52	2 nd

Source; field survey 2013

Factors influencing their involvement

In identifying factors influencing their involvement, the result in table 4 shows that the need to make more money (49.4%), common occupation in the study area (48%), and the prestige and social status attached (41.3%) are the three major factors that influence their involvement while friend's involvement (30.7%), parental influence (28.0%) and family custom (24%) are the three least factors which might influence their involvement. This implies that the economic and social situation are the major factors of their involvement rather than parental, peer or cultural factors. This may mean that many of them are from poor background who need to earn to a living, supplement income, support and contribute to their family. Also, the identified factors revealed that many of them were not forced into it but went into it on their personal volition determined by their socioeconomic status. As expected that parental influence would play a role in their influence but the result proved contrary.

Table 4; perceived factors influencing their involvement

Factors	Frequency(n=225)	Percentage	Rank
Parental influence	63	28.0	8 th
Family custom	54	24.0	9 th
Common occupation in the community	108	48.0	2 nd
Friends involvement	69	30.7	7 th
To make money	111	49.4	1 st
In order to contribute to family income	87	38.7	4 th
Charcoal availability	81	36.0	5 th
Presence of support	75	33.3	6 th
It is prestigious/social feeling	93	41.3	3 rd

Source; Field Survey, 2013

Disposition of the students towards charcoal production activities

A 36 statement 5 point scale was used to measure their disposition. Table 5 shows how they fared on each statement. On categorization in table 6, the result shows that majority of the respondents had neither favourable nor unfavourable disposition towards charcoal production. This very high percentage of indifference reveals a lack of focus, understand and perception of what they do.

Table 5; distribution of the respondent disposition

Statements	SD	D	U	A	SA	MEAN
	F(%)	F(%)	F(%)	F(%)	F(%)	
All in all, I am satisfied with my involvement in charcoal production	69(30.7)	51(22.7)	12(05.3)	33(14.3)	60(26.7)	2.84
It helps to increase and promote ones financial income	69(30.7)	30(13.3)	21(09.3)	39(17.3)	66(29.3)	3.01
I am involved because my parents are involved	102(45.3)	51(22.7)	24(10.7)	09(04.0)	39(17.3)	2.25
I am willing to continue in charcoal production	99(44.0)	48(21.3)	27(12.0)	15(06.7)	36(16.0)	2.29
I can encourage my colleagues to participate in it.	99(44.0)	30(13.3)	27(12.0)	18(08.0)	51(22.7)	2.52
The benefit is so high, so my involvement in it	90(40.0)	18(08.0)	21(09.3)	30(13.3)	66(29.3)	2.84
Even with the environmental effects it is still encouraging	78(34.7)	30(13.3)	18(08.0)	42(18.7)	60(26.7)	2.87
It helps to break the cycle of poverty	63(28.0)	24(10.7)	15(06.7)	51(22.7)	72(32.0)	3.20
It contributes to the numerous problem of our community	78(34.7)	21(09.3)	24(10.7)	42(18.7)	60(26.7)	3.07
It is an enterprise for the poor	51(22.7)	24(10.7)	18(08.0)	42(18.7)	90(40.0)	2.57
It helps to employ the unemployed students	75(33.3)	27(12.0)	15(06.7)	39(17.3)	69(30.7)	3.00
I don't care about the consequence but what I want to get	93(41.3)	39(17.3)	15(06.7)	36(16.0)	42(18.7)	3.47
I can't give up for another job	93(41.3)	42(18.7)	18(08.0)	15(06.7)	57(25.3)	2.56
Except for a better job, I will not give up charcoal production	105(46.7)	39(17.3)	15(06.7)	09(04.0)	57(25.3)	2.44
I don't care if it affect my performance in school	111(49.3)	30(13.3)	24(10.7)	18(08.0)	42(18.7)	3.67
My involvement in it has affected my school	93(41.3)	33(14.7)	36(16.0)	21(09.3)	42(18.7)	3.51
I don't care about anything anybody says, I will continue	111(49.3)	18(08.0)	21(09.3)	15(06.7)	60(26.7)	2.59
I can invest all my money in it	132(58.7)	18(08.0)	21(09.3)	09(04.0)	45(20.0)	2.19
It is very risky	69(30.7)	18(08.0)	33(14.7)	21(09.3)	84(37.3)	2.85

Very soon all the tree would finish	63(28.0)	30(13.3)	27(12.0)	24(10.7)	81(36.0)	3.13
Charcoal production is sustainable	81(36.0)	33(14.7)	21(09.3)	21(09.3)	69(30.7)	2.84
It is a prestigious job to do	87(38.7)	33(14.7)	30(13.2)	12(05.3)	63(28.0)	2.69
As far as I get money to feed myself, it is not bad	84(37.3)	18(08.0)	30(13.3)	30(13.3)	63(28.0)	2.67
The effect of charcoal production are only temporary	87(38.7)	36(16.0)	21(09.3)	15(06.7)	66(29.3)	3.28
Even when there are no more trees in my area, I will move to another place	87(38.7)	24(10.7)	09(04.0)	24(10.7)	81(36.0)	3.05
There is a need to replant more trees	102(45.3)	27(12.0)	09(04.0)	24(10.7)	63(28.0)	2.64
I am ready to transfer it to my children	129(57.3)	27(12.0)	09(04.0)	18(08.0)	42(18.7)	2.19
It is part of our culture	120(53.3)	27(12.0)	03(01.3)	24(10.7)	51(22.7)	2.37
Since our culture support it so it is good	120(53.3)	27(12.0)	03(01.3)	24(10.7)	51(22.7)	2.20
I don't believe the environment is threatened	105(46.7)	27(12.0)	15(06.7)	18(08.0)	60(26.7)	3.44
My status as a student does not affect my involvement	123(54.7)	39(17.3)	03(01.3)	12(05.3)	48(21.3)	3.79
I intend to continue on a full time scale after my secondary school	135(60.0)	33(14.2)	12(05.2)	12(05.2)	33(14.7)	2.00
It is relatively God's sent resources to my community	111(49.3)	18(08.0)	09(04.0)	18(08.0)	69(30.7)	2.63
This is our own resources and must be exploited to the full	96(42.7)	24(10.7)	12(05.3)	27(12.0)	66(29.3)	3.25
I hope to develop myself better in charcoal production	108(48.0)	33(14.7)	06(02.7)	12(05.3)	66(29.3)	2.53
Those involved are only wasting their time	81(36.0)	21(09.3)	09(04.0)	15(06.7)	99(44.0)	2.87

Source; field survey 2013

Table 6; categorization of the respondent disposition

Category	Freq	Percent
Unfavourable	24	10.7
Indifferent	198	88.0
Favourable	03	01.3

Source; field survey 2013

Difference in the disposition of those involved and those who are not involved in charcoal activities.

This hypothetical statement test whether there exist significant difference in the disposition of those that are involved in charcoal production and those that are not. The statement was tested using T-test tool. The result showed that there exist a significant different in their disposition ($t\text{-value} = 4.117$, $p < 0.05$). This means that those that were involved are more favourably disposed as they have reasons and understanding for their involvement of how the process work while those who are not involved are unfavourably. This support theoretical position that involvement of a target audience in any process improves their disposition, acceptance and sustainability of the process. Therefore the null hypothesis is rejected.

Table 7; Difference in the disposition of those involved and those who are not involved in charcoal activities.

	Mean	t-value	Df	p-value	Decision
Those that are involved	104.16	4.117	223	0.000	Significant
Those that are not involved	96.39				

Relationship between personal characteristics and the respondent disposition

This relationship was tested at $p < 0.005$ with selected personal characteristics. The result of the study shows that the features such as sex ($\chi^2 = 29.874$, $p = 0.000$), household size ($\chi^2 = 17.472$, $p = 0.002$), mother's occupation ($\chi^2 = 24.851$, $p = 0.000$) and parental involvement ($\chi^2 = 8.855$, $p = 0.012$) have significant relationship with their disposition. This implies that being a male or female affect their disposition as the activities involved requires more strength and time. Also, parental position affect the disposition as if the parents are involved they would support their ward which would ultimately affect their disposition but if the parents are not supportive, not involved, the disposition of such person will be unfavourable. Therefore to improve the disposition of the students there sex, parental status, household size and mother occupation would go a long way. Therefore the null hypothesis is rejected.

Table 8; Relationship between personal characteristics and the respondent disposition

Variables	χ^2 value	df	p-value	Decision
Sex	29.874	2	0.000	Significant
Father's occupation	10.096	6	0.121	Not significant
Mother's occupation	24.851	6	0.000	Significant
Indigene	1.120	2	0.571	Not significant
Age	5.342	4	0.254	Not significant
Duration of residency	7.259	8	0.509	Not significant
Household size	17.472	4	0.002	Significant
Parental involvement	8.855	2	0.012	Significant

CONCLUSION AND RECOMMENDATION

Based on the finding of the study, it could be concluded that the students in the study area are involved in activities related to charcoal production, they view it as a means of livelihood with their parental involvement as well as the society and their peers often motivate them to engage in charcoal production. The disposition is largely indifferent thus need proper orientation regards their involvement.

As emanated from the findings of the study, the study recommends the following: there is need for proper orientation of the students and youths in general as well as the inculcation of environmental sustainability into the curriculum of the schools. There is also the need for increased sensitization on the effect of the production activities on the environment while massive afforestation programme be put in place. There is need to put in place strict regulations on forest exploitation in order to reduce indiscriminate tree felling. There is need to create better livelihood options for the rural people, youth and students in order to divert them from participating in this practice. Students should be advised to focus on their studies as their involvement would have effect on their academic performance. For student that may be interested in going into charcoal production, training on efficient and modern ways of doing it should be given to them.

REFERENCES

- Ajiboye B. P (2002): Relationship between poverty and natural resources use among women in Birnin Gwari villages: Implication for sustainable development. (Unpublished M.Sc thesis) submitted to the Department of Agricultural Extension and Rural development, Ahmadu Bello University, Zaria
- B. D. Okello, T. G. O'Connor, T. P. Young (2000). Effects of fire, bruchid beetles and soil type on the germination and seedling establishment of *Acacia drepanolobium*. Afr. J Range and forage sci, in press.
- Jacobs, M. (1997). The New Politics of the Environment. In: Jacobs, M. (Ed.). Greening the Millennium? Blackwell
- Ladipo, D.O. (2000) Harvesting of *Irvingia gabonensis* and *Irvingia wombulu* in Nigerian forests: Potentials for the Development of Sustainable Systems. Proceedings of the seminar on harvesting of Non-Wood Forest products held at the International Agro-Hydrology Research and Training Center, Turkey between 2nd and 8th October 2000. Pp 325-334.
- Musa, Y.N. and Usman, I.S. (2013). The Role of Nigerian Youths in Agriculture and National Development : A Review. Proceedings of the 47th Annual Conference of the Agricultural Society of Nigeria, held between 4th and 8th November 2013, at the Federal College of Animal Production and Health Technology, Ibadan. pp 883-885
- Ogunsanwo, O.Y., Aiyelaja, A.A. and Uzo, .C. (2007) Production techniques and the influence of wood specie on the properties of charcoal in Nigeria, A case study of Oyo state. Agricultural Journal 2(1): 131:133.
- Olujide, M.G (2008). Attitude of Youth Towards Rural Development Projects in Lagos state, Nigeria. J. Soc. Sci., 17(2): 163-167
- National Bureau of Statistics (2006). Legal Notice on Publication of the Details of the Breakdown of the National and State Provisional Totals 2006 Census. p. 10
- Pearce, D.W., Barbier, E., Markandya, A., 1990. Sustainable Development: Economics and Environment in the Third World, Gower, Brookfield, VT. Publishers, Oxford.
- Rees, W.E. (1992). Ecological Footprints and Appropriated Carrying Capacity: What Urban Economics Leaves Out. Presented to Globe'92, Vancouver, British Columbia.
- Seriki, I. O. (2013). Effects of Ogun State Agricultural and Multipurpose Credit Agency (OSAMCA) Microcredit on Farming Activities of Cassava Farmers in Egba Zone of Ogun State. *International Journal of Applied Research and Technology*. 2(6): 20 – 27.

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