

# Assessment of the Training Needs of Wood Processors in Ondo State: Lesson for Agricultural Extension Administration in Nigeria

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**Abstract** The study investigated the training needs of wood processors with a view to determining the socio - economic characteristics of the processors, identify areas of training needs, and determine variables that influenced their training needs. Primary data were collected from six Local Government Areas (LGAs) purposively due to availability of saw mill industries. Two communities were randomly selected from each LGA. Ten wood processors were randomly selected from each community. A total of 120 wood processors were interviewed for the study. The results show that the mean age of the processors was 31 years and 45% of them were female while 64% were married with household size of 8 members. About 86% of the processors had formal education up to at least secondary school and 92% belong to Timber Contractor association. The mean years of working experience was 9. Training needs of these processors include, felling of matured trees, transportation of logs during the day time, Hammering, safety measures, environmental protection and profitable sawn among others. Age ( $b = .353$ ;  $p < .001$ ), Membership of Timber association ( $b = .163$ ;  $p < .05$ ) and experience on the job ( $b = -.347$ ;  $p < .003$ ) were found significant to influence the training need of wood processors. In conclusion, there is the need for agricultural extension administrators to continuously organize trainings for wood processors in order to enhance their safety, economic income and protect their environment.

**Keywords** Assessment, Extension Administration, Training Needs, Wood Processors

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## 1. Introduction

Nigeria is blessed with forest, savanna, as well as derived savanna vegetations. Savanna vegetations have few commercial timber species. Wood species commonly found in the savanna are useful for poles and fuel. Forests cover about 14 million hectares; this is about 16% of Nigeria's total land area. The bulk of Nigeria's 7.95 million hectares forest reserve land is situated in the savanna zone[1]. This is planned to check desertification of Nigeria land. The forest provides the raw materials for both primary and secondary industries while generating employment for a number of people. Forest is the science and practice of managing forests and woodlands. Objectives of forestry include timber production, amenity, recreation, conservation and creation of shelter for animals and crops.

Wood is characteristically a highly variable material exhibiting variation in physical, anatomical, mechanical and chemical properties. Wood processing is described as a form

changing activity carried out with the use of saw mills in order to get the required sizes of wood needed for a particular construction work. A large portion of the population now engages in wood processing either for exportation or local construction works. This helps to solve the problem of redundancy and unemployment in the country, both in the rural and urban areas. The wood based industries have played an important role in the development of some rural areas where the woods are gotten. This includes the construction of the roads leading to the forest and it has helped in increasing the standard of living of the people by providing them with job opportunities. The forest enterprises in Nigeria can be classified into either formal or informal. The formal enterprises include the organized wood based and furniture factories. The informal enterprises are the small forest based enterprises that engage in the production of firewood, charcoal, chewing stick and sculpture wood items. However, the increasing number of people involved in wood processing has brought about deforestation and this is posing a serious threat to our natural environments. All the efforts of the government to campaign for afforestation have proved abortive due to the non-challant attitude of the people towards the practice.

The sawmilling industry remains the most important wood

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based industry in Nigeria, accounting for 98.3% of the total number of wood-based industries of the nation[2]. As at 1980, when many of the wood industries such as pulp and paper mill, plywood and veneer-mills were still in operation, sawmills accounted for 96.6% of the total log volume processed[2]. The performance of the forestry sector was very impressive in the 1980s. It is a thing of concern that Nigeria forests have suffered a lot of devastation through illegal acts, which has resulted in de-reservation and deforestation. The forestry share of the GDP declined steadily from 4.2% in 1960 to 1.87% in 1985, 1.3% in 1995 and stood at 1.2% in 1998[3]. However, there has been a steady growth in the forestry share of the GDP since 2003 to 2007. For example, it was 1.50% in 2003, 6.65 in 2004, 5.92 in 2005 and 6.02 in 2006 and 2007[4].

The importance of forestry to the development of a nation cannot be overemphasized. Also the importance of agricultural extension services cannot be ignored in agriculture and rural development. Agricultural extension performs three important functions among others which include:

- i . getting farmers into a frame of mind and attitude conducive to acceptance of technological change;
- ii . dissemination of research output to farmers and also to carry the farmer's problems back to the research organization; and
- iii . help farmers gain managerial skill to operate in a commercial economy by providing training and guidance to them in decision making[5].

These germane functions of the extension are to be ensured by the administrators. Considering the importance of forestry in the provision of enormous resources, agricultural extension administrators must be up to the task to check the decline contributions to the nation's GDP. Majority of the rural dwellers that taps the forest resources do not have adequate training, thereby many of the resources that could be converted to cash or utilized by man or animals are wasted either directly or during processing.

[6] described training as means of maintaining, upgrading and updating skills throughout working life.[7] defined training as any attempt to improve employer performance on a current job. Since training is the acquisition of knowledge, skills and competences, it is important that agricultural extension administrators should constantly train people who utilize forest resources to improve their earnings.

Extension activities are expected to result into development. It is therefore essential in agriculture, health, industry and marketing. Extension service delivery is not prominent in industrial sectors of Nigeria; hence extension service delivery is not prominent among the rural dwellers that, utilize the forest resources. However, since these groups of people are involved in agro-allied products, agricultural extension administrators should oversee the extension activities in this sector pending the time of development of industrial extension in the country. This study is designed to assess the training needs of the wood processors with a view to improving their earnings and living standard. The study

will provide answers to the following research questions:

- i . What are the socio-economic characteristics of wood processing in the study area?
- ii . How proficient are the wood processors in the use of the set standard for wood processing?
- iii . What are the areas where wood processors should be trained?

### 1.1. Objectives of the Study

- i . identify the socio-economic characteristics of food processors in the study area;
- ii . determine the areas of training needs of the wood processors in the study area; and
- iii . determine important variables that influence training needs of the wood processors in the study area.

## 2. Materials and Methods

### 2.1. The Study Area

The study was carried out in Ondo State. The State is located in the South Western part of Nigeria. It lies between latitude  $5^{\circ} 45'$  and  $8^{\circ} 15'$  North of the equator and longitude  $4^{\circ} 30'$  and  $6^{\circ}$  East of the Greenwich meridian[8]. The population of the state by 2006 census was 4, 011, 407. The state is composed of low lands and rugged hills. It has a rainy season between April and October and dry season between November and March. It is bound by Ekiti State in the North, in the East by Edo and Delta States, in the West by Ogun and Osun States and in the South by the Atlantic Ocean.

### 2.2. Sampling Technique and Data Collection

Primary data were collected with structured interview schedule from the log wood processors of the state. Two Local Government Areas (LGAs) were purposively selected from the three senatorial districts due to availability of forest timber and two communities were randomly selected from each of the LGA. Ten wood processing centres were selected from each of the communities and the manager in charge was interviewed in each centre. A total of 120 respondents were selected and interviewed for the study. Data were summarized with frequency and percentage, mean and standard deviation. Regression analysis was used to determine important variables that influenced training needs of the wood processors.

### 2.3. Measurement of Variables

Two sets of variables were considered in the study. The dependent variable (training need of wood processors) and independent variables. The dependent variable was measured by considering the 25 standards/practices expected the wood processors to observe. Respondents were to respond yes or no to each of the set standard or practices. Where less than 75% of the respondent did observe and carry out the expected practice, training is not recommended but recommended otherwise.

Independent variables like age, sex, household size, years

spent in formal education etc were recorded directly as observed and mentioned by the respondents.

### 3. Results and Discussion

#### 3.1. Socio-Economic Characteristics

**Table 1.** Distribution of respondents according to socioeconomic characteristics N=240

Socio-economic characteristics	Frequency	Percentage	Mean
Age			
20 -30	35	29.17	31.12
31 – 40	49	40.83	$\delta = 10.21$
41 – 50	24	20.00	
51 – 60	10	8.33	
> 60	2	1.67	
Sex			
Male	66	55	
Female	54	45	
Marital Status			
Single	35	29.17	
Married	77	64.17	
Widowed/Widower	2	1.67	
Separated	1	0.83	
Household Size			
1 – 5 members	29	24.17	8.68
6 – 10	62	51.67	$\delta = 4.87$
11 – 15	17	14.17	
16 – 20	12	10.00	
Educational Level			
No – formal	6	5.0	
Primary	10	8.3	
Secondary	45	37.5	
Tertiary	59	49.2	
Visits by Government Agency			
Yes	104	86.7	
No	16	13.3	
Years of Experience			
1 – 10 years	98	81.7	
11 – 20 years	13	10.8	8.94
21 years & above	9	7.5	$\delta = 7.2$
Membership of Timber Association			
Yes	111	92.5	
No	09	7.5	
Ownership of Forest			
Yes	71	59.2	
No	49	40.8	
Access to Credit			
Yes	76	63.3	
No	44	36.7	

Source: Field survey, 2011

Results in Table 1 show that the mean age of wood processors in Ondo State was about 31years. It also revealed that only about 10 percent of them were above 50 years. This shows that wood processing was dominated by able bodied men in the study area. This might be due to the laborious nature of the work.

The table also shows that 45 percent of wood processors

were female. This shows that female sex was involved to render helping hands in some light work found at the processing centres. The table shows that 61.1 percent of the respondents were married. This showed their level of social responsibility. About 52 percent of the respondents had household size between 6 and 10. The mean household size was about 9 members. This could be considered very high when the mean age is considered. However, the number of dependants was likely to be responsible for this, since the work requires a lot of people and energy. Results in Table 1 further show that government agency visit saw mills to collect tax, explain what they were expected to be doing, to inspect their operations and to sanction illegality.

Results in Table 1 also show that majority (86.7%) of the wood processors had at least secondary school education. This showed that wood processing industry engaged many school leavers and reduces unemployment. The table also show that majority (92.5%) of the respondents belonged to timber contractor association. The mean years of wood processing experience was about 9 years. Majority (81.7%) had between 1 and 10 years of experience. This further confirmed that wood processors joined the industry at a tender age. About 63 percent of the respondents claimed they had access to credit facilities to facilitate their work.

#### 3.2. Areas of Training Need of Wood Processors

Results in Table 2 shows the twenty five standard practices which were set for the wood processors to follow in Ondo State. The table show that all the wood processors fell under girth trees, thus training is required in this respect. Also only 59.2 percent of the processors were not transporting their logs at night, therefore there is the need to train them in this respect. Also 72.5 percent confessed they were removing logs with timber marks (TM). Also about 46 percent claimed hammering on expired permit and 60.8 percent agreed to the fact that they transfer permits from one locality to the other without authority. Training is therefore recommended in all these areas. Furthermore, training was recommended in these areas; operating closed sawmill (66.7%); unhammered flitch sawn planks (60%); safety goggle worn when sawing (57.5%); overall dresses are worn during operations (45%); use of conspicuous colour of overall dresses (45%); wearing gloves when sawing (72.5%); covering machine when not in use (65%); cutting of small pieces of wood with large machine (41.7%); burning of wood waste indiscriminately (75.8%) and discharge of wood waste into nearby water/stream (81.7%). If wood processors could be trained in the mentioned areas, it would enhance their safety, protect the environment and enhance their productivity and income.

Results in Table 3 show that age ( $b = 0.353$ ;  $p \leq .001$ ) was positively significant with training need of wood processor in the area of study, this show that the more the age of processor, the more the training that are required, this may be true in order to avoid complacency. Years of experience in wood processing industry was negatively significant to

training need of wood processors ( $b = - .347$ ;  $p \leq .003$ ). This means that the more the years of experience of the processors, the less the training that should be organized for them. Also membership of wood contractor association ( $b = 0.163$   $p < .05$ ) was positive and significant with training needs. This

means that more training be organized for members of the association than non-members. This will enable the members to be more proficient than the non-members.

The regression equation from the analysis could be written as  $Y = 11.293 + 0.353x_1 + 0.163x_4 - 0.347x_5$ .

**Table 2.** Showing Areas of Training Needs of Wood Processors

1	Standard	No	Yes	Recommendation
1	Authorized felling		120(100)	RNT
2	Authorized removal of logs		120(100)	RNT
3	Non felling of under girth tree	120(100)		RT
4	Authorized conversion of logs into billets		120(100)	RNT
5	The use of permit within the locality which it was given		120(100)	RNT
6	No late night transport of logs	49(40.8)	71(59.2)	RT
7	Obtain necessary licensed (s) when due	9(7.5)	111(92.5)	RNT
8	Renew of license (s) when Due	9(7.5)	111(92.5)	RNT
9	Removal of log with Timber mark(TM)/forest consequanare (FCH) only	33(27.5)	87(72.5)	RT
10	Hammering on expired permit	65(54.2)	55(45.8)	RT
11	Transferring of permit from one locality to another without authority	47(39.2)	73(60.8)	RT
12	Using of log register in sawmill	23(19.2)	97(80.8)	RNT
13	Forgery of hammer TM/FCH.	120(100)		RNT
14	Re-opening of closed sawmill	15(12.5)	105(87.5)	RNT
15	Operating a closed sawmill	40(33.3)	80(66.7)	RT
16	Unhammered fitch sawn planks	48(40)	72(60)	RT
17	Safety goggles are worn when sawing	51(42.5)	69(57.5)	RT
18	Overall dresses are worn during operations	66(55)	54(45)	RT
19	Use conspicuous colour of overall dresses	66(55)	54(45)	RT
20	Working in pairs in sawmill	1(0.8)	119(99.2)	RNT
21	Wearing gloves when sawing	33(27.5)	87(72.5)	RT
22	Covering machine when not in use	42(35)	78(65)	RT
23	Cutting of small pieces of wood with large machine	70(58.3)	50(41.7)	RT
24	Burning of wood waste indiscriminately.	29(24.2)	91(75.8)	RT
25	Discharge of wood waste into nearby water/stream	22(18.3)	98(81.7)	RT

Source: Field survey, 2010. \*Percentage in parenthesis  
RT = Require Training RNT = Require No Training

**Table 3.** Regression Analysis showing determinants of training needs of wood processors

Model	Standard coefficients Beta	Sig.
(Constant)	(7.369)	.000
Age	.353 (3.452)	.001***
House hold size	.050 (.581)	.563
Years of Formal education	-0.66(-0.739)	.461
Member of Timber Contractor association	.163 (1.907)	.059*
How Long have you been in the Wood Processing Business	-.347(-3.045)	.003***
Previous Knowledge about wood Processing	-.082 (-.767)	.445
Do you have Forest area where you get Logs	.129 (1.037)	.302
If Yes size	.017 (.863)	.883
Do you have Access to Credit Facilities	.082 (2.635)	.390

R2 = .599 F value = 4.647

Source: Field Survey, 2010.

\*t Ratio in parenthesis

\*\*\* Significant at 0.1%

\*\* Significant at 1%

\* Significant at 5%

The coefficient of multiple determination  $R^2$  value of 0.599 indicates that about 60% of the total variance of the dependent variable (Y) was explained by the independent variables. It also shows that there are still about 40% variables that could influence training needs of wood processors that were not discussed in this study. All these significant variables should be considered by extension administrators when planning training needs of wood processors.

## 4. Conclusions

### 4.1. Conclusions

The study concluded that wood processors in Ondo State was made up of married, able bodied men and women who were experienced in the work and were well educated. More training should be organized for them in the areas of felling matured trees, hammering and permits, safety precautions in the saw mill, wood wastage and environmental sanitation. Some of the variables that influenced training need of wood processors include age, membership in timber association and years of experience in wood processing.

## Recommendations

1. Extension agency should organize trainings for experienced and other people joining wood processing industries.

2. Wood processing could be a source of employment for the citizen of the nation, if well harnessed by the stakeholders.

3. Training should be a continuous process when their needs are identified in the wood processing industries

4. Important variables like age, education, experience on the job among others should be considered when planning trainings for wood processors.

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