



## PERCEPTION OF FARMERS TOWARDS PRIVATE FOREST PLANTATION ESTABLISHMENT IN OSUN STATE

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### ABSTRACT

*This study was carried out to know the perception of farmers towards private forest plantation establishment in Osun State. One hundred and seventeen (117) questionnaires were administered randomly to selected respondents from the nine (9) selected communities in the study areas, while ninety-three (93) questionnaires were retrieved. Multi-stage sampling technique was used to select respondents from the study area. The result of the finding shows that majority (65.6%) of the respondents have not heard about private forest plantation establishment, but most of the respondents (59.1%) had high level of knowledge on establishment of forest plantation. Majority of the respondents had low response based on perception towards private forest plantation establishment due to some factors militating against the establishment of forest plantation in the study area. The result of the analysis shows that there is significant relationship exist between some social economic characteristic of the respondents and perception of the farmers to establish private forest plantation. It is therefore recommended that more farmers will be encouraged to participate in private forest plantation through government involvement at various levels of activities in forest plantation establishment as well as providing loans for farmers to establish forest plantation with pay-back period equivalent to the gestation period of the tree species.*

**Keywords:** Perception, Private, Forest, Plantation, Establishment

### INTRODUCTION

The population of developing countries depends largely on forest products and agriculture for livelihood. Therefore, they urgently need development, to improve food security and combat climate change issues. Agriculture has been the main stay of Osun's economy over the decades, especially since the giant strides made by the old Western Region Government. However, very little progress has been made over the years in building on this foundation to transform the economy of the state using agriculture and forestry as a driver. Due to a lack of focus in the agriculture sector, the gains achieved by the Western Region government have been gradually eroded (Ministry of Information, Osun State, 2009). Therefore, serious efforts are needed to be gathered towards encouraging farmers to combine tree crops and arable crops in the State and Nigeria as

a whole. The importance of forest plantation is increasing yearly as the population is increasing and demand for its product is rising and the supply from the natural is almost exhausted. Hence, the key players known as farmers have an important role to play in developing agriculture and forestry sector in terms of production and their involvement in forestry activities. The agroforestry practices adopted by farmers include retention of trees on farmland, planting of trees on boundaries, scattered trees on farmland, shifting cultivation and home gardening (Akinbile *et al.*, 2007). Forests are valuable and indispensable natural resources which satisfy a wide range of human needs. It provides some amenities for the benefit of mankind and these include timber, gum, medicinal herbs, fibres, foliage wildlife, fuel wood, tannins to mention but a few which account for a

large part of the house hold energy needs for rural people (Oguntala, 2005).

Moreover, forest plantations around the world provide important source of livelihood for many of the rural poor, although people necessarily make use of the forest in the same way and on the same level. In a matter of fact, forest dwellers do represent the group with the highest level of forest dependency (Arnold, 2001). Forest dwellers depends heavily on forest resources for subsistence with hunting, gathering and shifting cultivation (that is, clearance of forest land for agricultural purposes) as main livelihood activities and is an important basis for their rotational agricultural system (Burgers *et al.*, 2005). Forest dwellers are most often indigenous population groups that live in and with the forest according to their own traditions, making the forest also an important part of their social and cultural systems (Arnold and Bird, 1999). It has been demonstrated that the private sector in forest plantation establishment is probably less than 1.0% of the total forest plantation in the country, although FORMECU (1999) identified a growing interest by the private sector in establishing forest plantation.

Despite all the natural endowments of Osun state, several factors militate against forest plantation establishment in the area and these include: massive deforestation, lack of positive management plans, extensive grazing, illegal felling and inadequate qualified manpower. Thus, the perception of the farmers to establish private forest plantation need to be justified in the study area, since they have all the facilities on ground and favourable weather condition to establish forest plantation.

This paper therefore, focused on the perception of the farmers on private forest plantation establishment in Osun State. To this end, the objective of the study is to know the perception of the farmers to establish private forest plantation in the study area. However, the specific objectives are: to describe the socio-economic characteristics of the respondents, to determine the knowledge of respondents on private forest plantation establishment, to identify perceived constraints to private forest plantation establishment among respondents and to know the respondents'

perception toward private forest plantation establishment in the study area.

## MATERIALS AND METHODS

### Study Area

The study was carried out in Osun State, Nigeria. The State is situated in the tropical rain forest zone. It covers an area of approximately 14, 875 sq km and lies between latitude 7° 30' 00" and longitude 4o 30' 00". The 2006 census puts the population of the state at 3,416,959 million, (SEEDS, 2007). The state is made up of 30 local government areas with over 200 towns, villages and other settlements. The people of the state are mainly traders, artisans and farmers. Their other occupations include hand-woven textiles, tie and dye, leather work, calabash carving and mat weaving. Osun is an inland State in south- western Nigeria. The major sub-ethnic groups in Osun state are Ife, Ijesha, Oyo, Ibolu and Igbomina of the Yoruba people. The state runs an agrarian economy with a vast majority of the populace taking to farming, (SEEDS 2007).

### Experimental Design

The population of this study comprised the farmers in Osun State. Target population of this study comprised the farmers of selected communities in the three Local Government Areas (LGA). Multi-stage sampling technique was used to select the respondents in the study area. One (1) local government area was randomly selected from each of the three (3) senatorial districts in the study area. Three (3) communities were selected in each local government area using random sampling techniques to make a total of nine (9) communities. In each of the nine (9) sampled communities, thirteen (13) farmers were randomly selected in each community and semi structured questionnaire were administered to them. A total number of one hundred and seventeen (117) respondents were sampled to make up the total respondents for the study: while ninety-three (93) questionnaires were retrieved. The selected LGA and the sampled communities are presented in primary data was used to collect the information with the aid of structured interview schedule containing both closed and open ended questionnaire.

## Data Analysis

The data was analysed using frequency distribution and percentage. The hypotheses of the study were

tested using chi-square and Pearson product moment correlation (PPMC).

**Table 1: The name of the communities selected in each of the senatorial district**

Senatorial district	Local Government Area	Communities
Osun East	Ife North	Ipoeye, Olobo, Oyere- aborishade.
Osun West	Ede South	Olodan, Ararimu, Elewure.
Osun Central	Osogbo	Boredun, Onigboyi, Owode.

## RESULTS

Table 2 shows that there are more males (92.5%) that is willing to establish private forest plantation than females (7.5%) in the study area. It is attributed to the fact that establishment of forest plantation and other forestry activities might be tedious and could be handled by men than women. The age distribution shows that farmers within the age bracket 40-49years have the highest percentage of 53.8%. The table also revealed that majority (88.2%) of the respondents are married. Therefore, their participation would improve their standard of living which will also have major impact for their future endeavours. The result of the finding also revealed that respondents practicing Islamic religion had the highest of 55.9% followed by Christianity (43.0%) and Traditional (1.1%) as the lowest. This implies that Islamic religion is more dominated in the study area. The table also shows that respondents with household size of 0-4 have the highest of (72.0%), while respondents with household size of 5-8 had the lowest of (28.0%). Furthermore, the table shows that about 80.6% of the respondents had access to secondary school education; this revealed that the literate level of the respondents in the study area was above average which has influenced their perception towards establishment of private forest plantation. The study further revealed that majority (87.1%) of the respondents sourced for labour through hiring compared to those who source for the labour within

their family (12.9%). This also corresponds to the findings of Augustine *et al.*, (2010) that hired labour are probably due to the small family size and this ultimately leads to an increase in the cost of production.

Table 3 shows that majority (65.6%) of the respondents have not heard about private forest plantation while 34.4% acknowledged they did. This might be due to low awareness created by the extension agents in the study area which contribute to low involvement in private forest plantation. The respondents that are not practicing agroforestry are still on high side (50.5%). This may be due to the technical know- how and knowledge of respondents on agroforestry practices that is low. Majority (62.4%) of respondents did not know that individual or private organization can establish forest plantation. The result further shows that majority (53.8%) of the respondents does not have any relationship with forest staff, while 65.6% of the respondents have difficulty coping with tree tending. This result implies that majority of the respondents were having difficulties in coping with trees management. Furthermore, respondents' perception shows that majority (87.1%) of the them know that trees takes several years to mature, while majority (86.0%) of the respondents agrees that exotic species in private forest plantation establishment are better than indigenous species.

**Table 2: Socio-economic characteristics of the respondents**

Variable	Frequency	Percentage (%)
Sex		
Male	86	92.5
Female	07	07.5
Age (years)		
21-29	02	02.2
30-39	15	16.1
40-49	50	53.8
50-59	25	26.9
60 Above	01	01.1
Marital Status		
Married	82	88.2
Single	11	11.8
Religion		
Christianity	40	43.0
Islamic	52	55.9
Traditional	01	01.1
Household Size		
0-4	67	72.0
5-8	26	28.0
Level of Education		
Primary	14	15.1
Secondary	75	80.6
Tertiary	04	04.4
Source of labour		
Family	12	12.9
Hired	81	87.1
Total	93	100

**Table 3: Knowledge of respondents on private forest plantation establishment**

S/No.	Item	Yes F (%)	No F (%)
1	Have you heard about PFP?	32 (34.4)	61 (65.6)
2	Are you practicing Agroforestry?	46 (49.5)	47 (50.5)
3	Do you know that individual or private organization can establish forest plantation?	35 (37.6)	58 (62.4)
4	Do you have any relationship with forest staff?	43 (46.2)	50 (53.8)
5	Difficult coping with tree tending?	61 (65.6)	32 (34.4)
6	Have you heard about policy guiding forestry activities?	45 (48.4)	48 (51.6)
7	Do you know how to plant trees?	35 (37.6)	58 (62.4)
8	Do you have knowledge on management activities involves forest plantation establishment?	35 (37.6)	58 (62.4)
9	Trees/forest plantation establishment takes several years to mature?	81 (87.1)	12 (12.9)
10	Indigenous species are better than exotic species in PFP establishment?	13(14.0)	80(86.0)

Table 4 above reveals that mostly (59.1%) of the respondents agreed that management activities involve in forest plantation establishment are difficult to practice. The result further revealed that majority (81.7%) of the respondents agreed that forest plantation establishment as a practice can improve farm productivity and land management. About 67.7% of the respondents agreed that its practices are not properly understood, while 64.5% of the respondent agreed that it is also a practice that can be used to mitigate climate change. Mostly 63.4% respondents agreed that it is a long term investment which will not enable the investor to have return on time. It can also be deduced from the table that most (51.6%) of the respondents disagreed that private forest plantation is easy to establish. The table also shows that most 63.4% of

the respondents agreed that establishment of private forestry serve as alternative income generation for people, while 61.3% of the respondents agreed that it is used to prevent soil erosion and degradation, therefore, protecting the ecosystem of the farm and surrounding. The respondents' perception also revealed that 64.5% of the respondents agreed that involvement in private forest plantation establishment will improve supply of planks, while 63.4% of the respondents agreed that if forest plantation is properly managed, it will serve as source of foreign exchange. The table finally reveals that mostly 58.1% of the respondents agreed that favourable policies guiding the activities of forest plantation will encourage individual to participate in its establishment.

**Table 4: Respondents perception towards private forest plantation establishment**

S/No.	Respondents perception	Strongly Agree F(%)	Agree F(%)	Disagree F(%)	Strongly Disagree F(%)
1	Management activities involve are difficult to practice.	6 (6.5)	55 (59.1)	32 (34.4)	0(0.00)
2	As a practice that can improve farm productivity and land management.	7 (7.5)	76 (81.7)	10 (10.8)	0(0.00)
3	Its practices are not properly understood.	18 (19.4)	63 (67.7)	12 (12.9)	0(0.00)
4	It is a practice that can be used to mitigate climate change.	24 (25.8)	60 (64.5)	9 (9.7)	0(0.00)
5	It is a long term investment.	30 (32.3)	59 (63.4)	4 (4.3)	0(0.00)
6	Private forest plantation is easy to establish.	28 (30.1)	11 (11.8)	48 (51.6)	6 (6.5)
7	Establishment of private forestry serve as alternative income generation for people.	27 (29.0)	59 (63.4)	7 (7.5)	0(0.00)
8	It is used to prevent soil erosion and degradation.	28 (30.1)	57 (61.3)	8 (8.6)	0(0.00)
9	Involvement in PFP establishment with improve supply of planks	28 (30.1)	60 (64.5)	5 (5.4)	0(0.00)
10	If forest plantation is properly managed, it will serve as source of foreign exchange.	28 (30.1)	59 (63.4)	6 (6.5)	0(0.00)
11	Favourable policies guiding the activities of forest plantation will encourage individual to participate in its establishment.	30 (32.2)	54 (58.1)	7 (7.5)	2 (2.2)

Table 5 revealed that majority (81.7%) of the respondents did not consider fire outbreak as a major problem because all necessary farm activities that are needed to be done during farm season are being taken to consideration. While the remaining constraints listed were considered as major perceived constraints to private forest plantation establishment as follows: poor extension service (92.5%), land tenure system

(83.9%), small land holding (84.9%), non-availability of seed/seedlings (95.7%), lack of technical know-how (66.7%), long term investment (53.8%), lack of finance (90.3%), government policies (95.7%), shortage of labour supply (82.8%), poor transportation during raining season (87.1%), trees casting shadow on crops and unnecessary competition for soil nutrient with arable crops (76.3%).

**Table 5: Perceived constraints of respondents to private forest plantation establishment**

S/No.	Constraints	Major F(%)	Minor F(%)	Not a constraint F(%)
1	Fire outbreak	4 (4.3)	13 (14.0)	76 (81.7)
2	Poor extension service	86 (92.5)	7 (7.5)	0(0.00)
3	Land tenure system	78 (83.9)	14 (15.1)	1 (1.1)
4	Small land holding	79 (84.9)	13 (14.0)	1 (1.1)
5	Non availability of seed/seedlings	89 (95.7)	4 (4.3)	0(0.00)
6	Lack of technical know-how	62 (66.7)	29 (31.2)	2 (2.2)
7	Long term investment	50 (53.8)	8 (8.6)	35 (37.6)
8	Lack of finance	84 (90.3)	8 (8.6)	1 (1.1)
9	Government policies	89 (95.7)	4 (4.3)	0(0.00)
10	Shortage of labour supply	77 (82.8)	16 (17.2)	0(0.00)
11	Poor transportation during raining season	81 (87.1)	12 (12.9)	0(0.00)
12	Trees casting shadow on crops	72 (77.4)	15 (16.1)	6 (6.5)
13	Unnecessary competition for soil nutrient with arable crops	71 (76.3)	13 (14.0)	9 (9.7)

Chi-square analysis revealed that, significant relationship exist between the sex, level of education, source of labour and secondary occupation on perception to establish private forest plantation, sex ( $X^2 = 23.038$ ,  $P = 0.000$ ), level of education ( $X^2 = 18.476$ ,  $P = 0.001$ ), source of labour ( $X^2 = 10.073$ ,  $P = 0.006$ ) and secondary occupation ( $X^2 = 12.458$ ,  $P = 0.052$ ). This implies that the sex, level of education, source of labour and

secondary occupation of the respondents influenced their perception to establish private forest plantation. However, age ( $X^2 = 12.615$ ,  $P = 0.126$ ), marital status ( $X^2 = 2.005$ ,  $P = 0.367$ ) religion ( $X^2 = 2.340$ ,  $P = 0.674$ ) and household size ( $X^2 = 0.065$ ,  $P = 0.968$ ) of respondents were found to have no significant relationships with their perception to establish private forest plantation.

**Table 6: Chi-square analysis of socio-economic characteristics of the respondent and their perception towards establishment of private forest plantation**

Variables	$X^2$ -value	P-value	Decision
Sex	23.038	0.000	S
Age	12.615	0.126	NS
Marital status	2.005	0.367	NS
Religion	2.340	0.674	NS
Household size	0.065	0.968	NS
Level of education	18.476	0.001	S
Source of labour	10.073	0.006	S
Secondary occupation	12.458	0.052	S

$S = (P \leq 0.05)$

The result as presented in table 7 shows that there is significant relationship between perceived constraints of the respondents and their perception to establish private forest plantation ( $P < 0.05$ ). This means that there are perceived constraints which influence respondents' perception to establish

private forest plantation. The negative sign on the r-value show that there is an imbalance relationship between the perceived constraint and perception to establish private forest plantation among the respondents.

**Table 7: PPMC analysis showing relationship between perceived constraints and perception to establish private forest plantation**

Variable	r-value	p-value	Decision
Perceived constraints and Perception	-0.213	0.040	S

## DISCUSSION

The result of the study confirmed the report of Adekunle, (2009) which stated that people in this age group (40-49 years) are agile and gainfully employed in farming, hence their involvement on decision making process of farmers with respect to adoption of improved agricultural technologies and other production related decisions to establishment of forest plantation. It can also be inferred from the result that the household size is not fairly large and these enable them not to get a better source of income and also they cannot rely on their household for labour, this is in agreement with Sunderlin, (2005). The result further agrees with the findings of Banjo and Abu, (2014) who reported that formal education is an essential socio-economic factor that influences farmers' decision because of its effect on the knowledge and perception. The result is also in agreement with the findings of Akinbile *et al.*, (2007) who noted that agroforestry has a way of instituting sustainable agricultural development in Nigeria. This is because agroforestry has the ability to combat the various environmental problems with the purpose of assisting farmers to maintain the fertility of their soils, ensure diversification of crop, wood and timber species and to stabilize, improve and conserve ones environment, in which most of the respondent do not know. The result of the study also agrees with the findings of Udofia *et al.*, (2011), who opined that vast areas of forest are being converted into plantation of exotic tree species, due to the believed that they grow faster than the indigenous species.

It can also be deduced from the result which is in agreement with the findings of Onyekwelu (2001) who postulated that there is need to reform government policies, incentives, extension service,

and provision of seed/seedlings in other to motivate and encourage farmers in agricultural production. Also tackling other problems like long gestation period, land tenure, shortage of labour supplies and logging problem due to poor transportation during the raining season.

## CONCLUSION

The major factors contributing to respondents' perception in the study area were sex, level of education, source of labour and secondary occupation, while age, marital status, religion, and household size found to have a negative impact on the willingness level. It can also be concluded that many of the farmers are however faced with some problems which influence their perception in establishing private forest plantation. These problems include; poor extension service, land tenure system, small land holding, non-availability of seed/seedlings, Government policies, poor transportation during raining season and trees casting shadow on crops.

## Recommendations

- i. Therefore, government should endeavour to distribute tree seedlings to farmers freely.
- ii. Where ever possible, short rotation tree seedlings should be given to farmers so as to encourage them to plant trees on their farm land.
- iii. There is need for the government involvement at various levels of activities that will encourage individual and organisation to establish private forest plantation and urban forest development.
- iv. Land acts are to be reformed by government to get more people to participate in community forest plantation establishment.

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