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# SMALL SCALE OIL PALM FARMERS' PREFERENCE FOR TRAINING IN SOUTH WEST, NIGERIA

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## ABSTRACT

The study assessed small-scale oil palm farmers' farm situations and their preferences for training in South Western Nigeria. Both purposive and random selection techniques were used in selecting the 331 respondents for the study. Data were collected with a structured questionnaire and analyzed using both descriptive and inferential statistics. Findings showed that oil palm production was male-dominated (93.6%) with a mean age of 53 years; married (93.6%) and possessed an average farm size of 3.1 hectare. Acquisition of farm lands was mainly through inheritance (47.9%) and self-acquisition through purchases (44.4%). The plantations are located at a range of 100 metres and 55 kilometres away from farmers' home. Farmer workshop ( $\bar{x}$ = 2.3; s = 1.46), field training with extension agents ( $\bar{x}$ = 2.8; s = 1.78), and proficiency courses ( $\bar{x}$ = 3.2; s = 1.77), respectively were most preferred types of training on oil palm production. Similarly, farmers (84.9%) preferred trainings conducted in the morning hours, Mondays to Wednesdays of the week (59.8%) and January to April of the year (54.7%). Level of education ($\chi^2$ = 17.18; $p < 0.05$), farm size ($\chi^2$ = 12.79; $p < 0.05$), type of oil palm plantation ($\chi^2$ = 27.20; $p < 0.05$) and age of plantation ($\chi^2$ = 29.79; $p < 0.05$) have significant association with respondents preferences for training situation. There was no significant difference between respondents' preferences for training across the sampled states. It was recommended that adequate training needs and situation analyses should be carried out before organizing training for farmers.

## INTRODUCTION

The oil palm (*Elaeis guineensis* Jacq) is one of the most economic tree crops in the tropics and the highest source of vegetable oil, of all oil-bearing plants (Omoti, 2004). Prior to 1965, Nigeria was the world leading producer and exporter of palm oil and contributes about 65% of the total world market, but by the late 1970's and 80's, Nigeria became a net importer of crude palm oil and vegetable oil. The situation today has not changed with varying government policies on banning and un-banning importation of crude vegetable oils. Studies by Soyebo *et al*. (2005) and Omoti (2003) showed that non adherence to recommended practices are some of the mitigating factors affecting the production and processing of the oil palm in Nigeria.

Training is a planned process designed to modify attitude, knowledge or skill through learning experience to achieve effective and better performance of an activity or range of activities (Manpower Services Commission, 1981). The purpose of training is thus to impart knowledge and skills that are applicable to practical situations. Meenambigai and Seetharaman (2003) asserted that training is the most singular factor affecting individuals' attitude, productivity, improvement, risk minimization and quality of job performance in any endeavour. It entails a skillful management of both human and physical resources to facilitate desired change. According to Okwu and Ejembi (2005), training is concerned with those activities designed to improve human performance on specific job and it is usually short-term, narrowly focused and specifically designed to meet specific need that has immediate application. Training is expected to result in change of behaviour or performance of individuals. Farmer training involves usage of contemporary extension teaching methods of individual, contact group, result demonstration and mass media method of training, conducted for a few days. Farmer training can also be in form of adaptive research trials, discussions and village or farm gate demonstrations with emphasis on critical steps required for effective farm production. Training is an organised effort at behaviour change. Olowu (1992) contended that getting farming audience to receive, understand and act upon new and improved technologies recommended by research and extension requires setting up appropriate learning/training activities.

Oil palm farmers need capacity building to improve their farm situations and thereby yield. The Nigerian Institute for Oil Palm Research (NIFOR), Agricultural Development Programmes (ADPs) and various Non-governmental Organizations (NGOs) are known to organize trainings on oil palm development for farmers. However, in the planning and execution of such trainings, attention is rarely paid to farmers' training preferences. It is in line with this that the study specifically aimed to:

- examine the socio-economic characteristics of the small-scale oil palm farmers in the study area
- identify the in-situ farm situations of oil palm plantations in the study area,
- identify previous trainings attended by respondents
- determine their preferences for type of training.
- determine respondents' preferred time for training.

The following hypotheses stated in the null forms were tested:

**$H_{01}$**: There is no significant relationship between selected respondents' socio-economic characteristics and their preferences for training.

**$H_{02}$**: There is no significant relationship between farmers' farm situations and their preference for training

**$H_{03}$**: There is no significant difference in respondents' preferences for training between the 3 states sampled.

## METHODOLOGY

The study was conducted in the South West agricultural zone of Nigeria, which lies between latitude 50 and 90N with a total land area of 114, 271 km2, representing 12 percent of the total land area of Nigeria. The area consists of the following eight states: Oyo, Ogun, Ondo, Osun, Ekiti, Lagos, Edo and Delta States Agriculture accounts for approximately 80 per cent of economic ac-

tivities within the zone, with variations occurring among states. Tree crops cultivated in the zone are oil palm, cocoa and kola. A multistage sampling procedure was used as follows:

The first stage was the purposive selection of three states (Edo, Ogun and Ondo states) out of the eight states in the zone based on the intensity and cultivation of oil palm. The second stage was also a purposive selection of representative number of ADP zones per state, based on the concentration of oil palm farmers. Zones selected were the Southern and Northern zones in Edo state out of the existing three zones. Similarly, from the two and four zones in Ondo and Ogun states, one and two zones were selected respectively. These are zone II, comprising Ondo/Okitipupa area of Ondo state and Ilaro and Ijebu-Ode zones in Ogun state.

The third stage was the use of the Krijcle and Morgan's table (1970) for determining sample size from a given population. A total sample size of three hundred and eleven respondents was randomly selected from a population size of two thousand three hundred and five farmers.

A structured questionnaire subjected to both face and content validity, was used for data collection. Split-half method of test of reliability was used to ascertain the reliability of the instrument. Using a Likert-scale type, information on farm situation, were accessed through the following variables: Farm ownership, land ownership, distance of farm from farmers home, number of farm location, Type of oil palm plantation and Age of plantation.. Farmers' preferences for training were determined by farmers' preference ratings for types of training, time of the day for training, day of the week for training and month of the year most appropriate for training on oil palm production activities. Collected data were analyzed using the SPSS version 11 for both descriptive and inferential statistics.

## RESULTS AND DISCUSSION

### *Socio-economic characteristics of respondents*

Table 1 reveals that ages of farmers range from 27 to 81 years, 31.5 percent of the respondents fall between the ages of 41 and 50 years while the majority (56.9%) was above the age of 50 years. This finding is in agreement with Aniedu *et al.* (2007) who observed that small-scale oil palm farmers were mainly 50 years and above, he termed them 'old people'. Also, 93.6 percent of the respondents were males and married (93.6%) which implies that oil palm cultivation is mainly a male activitiy. A high proportion of the respondents (57.9%) were members of one farmer organisation. Most of the respondents (76.2%) were Christians while 5.5 percent were into traditional religion. Majority of the farmers (57.9%) have farms of between 1 and 3 hectares while 10 percent of respondents have farm sizes of 10 hectare and above. Average farm size maintained by the farmers was 3.1 hectare and the actual range of farm sizes maintained by the respondents was between 0.2 hectare and 50 hectares.

### *Information on farm situation*

The result shows that most of the farms were owned by the respondents as only 2.6 percent of the respondents claimed not to be the owners of farms (Table 2). Acquisition of farm lands was mainly by inheritance (47.9%) and self-acquisition through purchases (44.4%). Most of the surveyed plantations were located at a range of 100 metres

and 55 kilometres away from farmers' home, 55.6 percent of the farms were located 1 to 3 kilometres away from farmers' home and on a single spread of land that is, in one location (67.8%). This result supports the observation of Soyebo *et al.* (2005) that oil palm farm sizes are very small and close to farmers home due to land ownership pattern which is usually through inheritance. The oil palm plantations in the study area were sole cropped as about 72.5 percent of the farmers were found to plant only oil palm without intercrops. However, 19.9 percent of farmers intercrop their oil palm with arable crops while 7.7 percent of the farmers intercrop their oil palm with perennial crops. The main intercrops were cassava, maize, yam, kola, cocoa and coffee. The plantations were young with ages of the palms trees ranging from 1 to 20 years (73%). It is however noteworthy that 43.4 percent of respondents have palms of ages 1 – 10 years. According to Omereji (2005) the oil palm reaches its maximum yields at the 9th and 12th year after field planting depending on agronomic management and the soil fertility status. Therefore with proper application of improved oil palm production technologies, these palms are expected to be at the peak of their production.

### *Current Trainings Attended by Farmers (2001 - 2006)*

Current trainings attended were taking as trainings attended by the oil palm farmers within a pre-determined period of five years as the oil palm has an average gestation period of five years, from planting to maturity of fruit production.

The result in Table 3 shows that majority of the farmers (68.2%) did not attend any training, while only 21.8 percent of the farmers attended trainings 1-4 times within the period. As regards duration of trainings, 11.6 percent of the farmers attended trainings for 1 to 4 days, 56.9 percent of these, attended trainings for just 1 day. Major types of training attended by the respondents within the period were Proficiency courses (22.8%), Exhibition, Trade Fairs (20.6%), and Farmer workshop (18.6%), respectively. It is noteworthy that 54.7 percent of the respondents confirmed never to have attended any training on oil palm production.

### *Preferences for types of training*

Respondents indicated their preferences for types of training by ranking a listed farmer training types. As shown in Table 4, respondents ranked farmer workshop ($x$ = 2.3), field training with extension agents ($x$ = 2.8) and proficiency courses ($x$ = 3.2) respectively as most preferred types of trainings on improved oil palm production. Least preferred type of training by the oil palm farmers is exhibition/trade fairs ($x$ = 4.4)

### *Farmers' preferences for time for training*

Most of the farmers (84.9%) preferred that trainings on improved oil palm production technologies be conducted in the morning hours of the day, while only 2.6 percent of respondents prefer trainings be conducted anytime of the day (Table 5). This finding is important as it takes into cognisance the fact that farmers share their time for various farm and other livelihood related activities. In relation to the day of week, trainings are most preferred on Mondays to Wednesdays by the farmers as 59.8 percent of the respondents indicated their preferences for Mondays to Wednesdays for trainings on oil palm development. However, of the three days, Mondays are the most preferred (22.8%). Table 5

**Table 1: Socio-Economic Characteristics of Respondents (n =311)**

| Characteristics | Frequency | Percentage |
|---|---|---|
| **Age (years)** | | |
| 21 – 30 | 8 | 2.6 |
| 31 – 40 | 28 | 9.0 |
| 41 – 50 | 98 | 31.5 |
| Above 50 | 177 | 56.9 |
| Total | 311 | 100.0 |
| Actual range = 27 – 81; Mean = 53 yrs | | |
| **Sex** | | |
| Male | 291 | 93.6 |
| Female | 20 | 6.4 |
| Total | 311 | 100.0 |
| **Marital Status** | | |
| Married | 291 | 93.6 |
| Single | 9 | 2.9 |
| Widow / Widower | 9 | 2.9 |
| Divorced / separated | 2 | 0.6 |
| Total | 311 | 100.0 |
| **Religion** | | |
| Christianity | 237 | 76.2 |
| Islam | 57 | 18.3 |
| Traditional | 17 | 5.5 |
| Total | 311 | 100.0 |
| **Membership of Farmer organi-sations** | | |
| Farmer cooperative | 105 | 33.8 |
| Oil palm growers association | 68 | 21.9 |
| Esusu | 27 | 8.7 |
| Non membership | 131 | 42.1 |
| **Farm size (ha)** | | |
| Less than 1 ha | 24 | 7.7 |
| 1 – 3 | 180 | 57.9 |
| 4 – 6 | 17 | 5.4 |
| 7 – 9 | 59 | 19.0 |
| Above 9 ha | 31 | 10.0 |
| Actual range: 1 – 50 | | Mean = 3.1 |

Source: Field survey 2007

**Table 2: Distribution of respondents according to their farm situation (n = 311)**

| Farm Situation | Frequency | Percentage |
|---|---|---|
| **Farm ownership** | | |
| Yes | 303 | 97.4 |
| No | 8 | 2.6 |
| **Land ownership** | | |
| Self | 138 | 44.4 |
| Inherited | 149 | 47.9 |
| Hired | 27 | 8.7 |
| Communal | 3 | 1.0 |
| Family | 15 | 4.8 |
| **Distance to farm (km)** | | |
| Less than 1km | 28 | 9.0 |
| 1 – 3 | 173 | 55.6 |
| 4 – 6 | 72 | 23.2 |
| Above 6 km | 38 | 12.2 |
| Actual range: 0.05 – 55km | | |
| **Farm locations (No.)** | | |
| 1 | 211 | 67.8 |
| 2 | 72 | 23.2 |
| 3 | 19 | 6.1 |
| 4 | 8 | 2.6 |
| 5 | 1 | 0.3 |
| Type of oil palm plantation | | |
| Sole cropped | 225 | 72.4 |
| Intercropped with arable crops | 62 | 19.9 |
| Intercropped with perennials | 24 | 7.7 |
| **Age of Palms (yrs)** | | |
| 1 – 10 | 135 | 43.4 |
| 11 – 20 | 92 | 29.6 |
| 21 – 30 | 39 | 12.5 |
| 31 – 40 | 32 | 10.3 |
| Above 40 years | 13 | 4.2 |

**Source**: Field survey 2007 n >311 due to multiple responses

**Table 3: Current trainings attended by Farmers (2001-2006)**

| Trainings Attended | Frequency | Percentage |
|---|---|---|
| **Training Types** | | |
| Proficiency courses | 71 | 22.8 |
| Farmer workshop | 58 | 18.6 |
| Field training with Extension Agents | 54 | 17.4 |
| Field day | 50 | 16.1 |
| Exhibition/Trade fairs | 64 | 20.6 |
| Did not attend any training | 212 | 68.2 |
| | | |
| Number of times | Frequency | Percentage |
| 1 – 4 | 71 | 22.8 |
| 5 – 8 | 23 | 7.4 |
| More than 8 | 5 | 1.6 |
| Did not attend any | 212 | 68.2 |
| | | |
| Duration (Days) | Frequency | Percentage |
| 1 – 4 | 36 | 11.6 |
| 5 – 8 | 35 | 11.3 |
| 9 – 14 | 28 | 9.0 |
| More than 14 | 13 | 4.1 |
| Never attended trainings | 170 | 54.7 |

Source: Field survey 2007 . n > 311 in some cases due to multiple responses

These findings have implication for extension activities directed at oil palm farmers especially in the study area. Table 5 also reveals that majority of the farmers (54.7%) preferred trainings on improved oil palm production technologies, be conducted between the months of January and April, while 5.1 percent of respondents prefer any month between January and December. In accordance with the cultivation pattern of the oil palm in Nigeria, January to April are months when activities such as site selection, Land preparation and field plantings are carried out and a time farmers make vital decisions on farm activities for the year. This perhaps explains why these months were preferred by the respondents for trainings.

***Hypothesis testing***

**$H_{01}$**: There is no significant relationship between respondents' selected socio-economic characteristics and their preferences for

**Table 4: Farmers preferences for Training Situations**

| Training Types | Mean | SD | Rank |
|---|---|---|---|
| Farmer workshop | 2.3 | 1.46 | 1st |
| Field training with EA | 2.8 | 1.74 | 2nd |
| Proficiency | 3.2 | 1.77 | 3rd |
| Field days | 3.5 | 1.67 | 4th |
| Field trips | 4.0 | 1.61 | 5th |
| Exhibition/trade fairs | 4.4 | 1.44 | 6th |

Source: Field survey 2007

training.

The result of the chi-square analysis indicates that respondents' level of education ($\chi^2$ = 17.18; p < 0.05) and farm size ($\chi^2$ = 12.79; p < 0.05) have significant association with respondents' preferences for training. This result suggests that level of education and farm size can influence farmer's preference for type of training as well as time for training.

**$H_{02}$**: There is no significant relationship between respondents' farm situation and their preference for training.

The chi-square analysis in Table 7 shows that the type of oil palm plantation ($\chi^2$ = 27.20; p < 0.05) and age of plantation ($\chi^2$ = 29.79; p < 0.05) have significant association with respondents' preferences for training.

**$H_{03}$**: There is no significant difference in farmers' preferences for training situation between the states

Table 8 shows the result of the analysis of variance (ANOVA) test of difference between respondents' preferences for training situation across the three states. The result indicates that there is no significant difference between respondents' preferences for training across the three states. This implies that preferences for training across the states are similar. This result might be due to the similar socio-cultural situation of the sampled states.

**Table 5: Farmers' preferences for time of training**

| Time of training | Frequency | Percentage |
|---|---|---|
| **Preferences for Time of the Day** | 264 | 84.9 |
| Morning | 16 | 5.1 |
| Afternoon | 23 | 7.4 |
| Evening | 8 | 2.6 |
| Anytime of day | 311 | 100.0 |
| Total | | |
| **Preferences for training day of week** | | |
| Monday | 71 | 22.8 |
| Tuesday | 43 | 13.8 |
| Wednesday | 41 | 13.2 |
| Thursday | 19 | 6.1 |
| Friday | 25 | 8.0 |
| Saturday | 23 | 7.4 |
| Sunday | 26 | 8.4 |
| Monday – Friday | 58 | 18.6 |
| Any day | 5 | 1.6 |
| Total | 311 | 100.0 |
| **Preferences for Month of Year** | | |
| Jan – April | 170 | 54.7 |
| May – August | 54 | 17.4 |
| Sept – Dec | 38 | 12.2 |
| Every month | 16 | 5.1 |
| Any month | 33 | 10.6 |
| Total | 311 | 100.0 |

Source: Field survey 2007

**Table 6: Relationship between respondents' socio-economic characteristics and preference for training**

| Socio-Economic Characteristics | Chi-square | df | P-Level | Decision |
|---|---|---|---|---|
| Age | 26.52 | 6 | 0.085 | Not significant |
| Gender | 6.74 | 2 | 0.199 | Not significant |
| Marital status | 11.93 | 6 | 0.858 | Not significant |
| Educational level | 17.18 | 8 | 0.002 | Significant |
| Membership of farm organization | 105.36 | 2 | 0.052 | Not significant |
| Farm size | 12.79 | 6 | 0.021 | Significant |

Significant at $p<0.05$

**Table 7: Relationship between respondents' farm situation and their preference for Training**

| | Chi-square | df | P-level | Decision |
|---|---|---|---|---|
| Land ownership | 2.32 | 4 | 0.148 | Not Significant |
| Distance of farm from farmers home | 4.96 | 4 | 0.082 | Not Significant |
| Number of farm location | 1.64 | 4 | 0.423 | Not Significant |
| Type of oil palm plantation | 27.20 | 6 | 0.013 | Significant |
| Age of plantation. | 29.79 | 6 | 0.005 | Significant |

Significant at $p<0.05$

**Table 8: Analysis of Variance of the relationship between respondents' preferences for training situation across the states**

| | Sum of squares | df | Mean square | F | p | Decision |
|---|---|---|---|---|---|---|
| Between states | 5.384 | 2 | 3.921 | 16.447 | 0.087 | Not Significant |
| Within states | 68.437 | 308 | 0.207 | | | |
| Total | 81.858 | 310 | | | | |

## CONCLUSION

Based on empirical evidence of this study, it could be concluded that the Oil palm farmers have poor access to training opportunities. The study has also shown that farmers have preference to certain types of training and time of training. Similarly, level of education, size of plantation, type of plantation and age of the plantations play significant roles in farmer preferences for training and as such have implication for planning and execution of training programmes for oil palm farmers.

## RECOMMENDATION

Based on these conclusions, it was therefore recommended that institutions involved in the training on oil palm production such as the Nigerian Institute for Oil Palm Research (NIFOR) and the ADPs should carry out adequate training needs assessment to include farm situation of prospective trainees in order to conduct effective and beneficial training for farmers.

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