



CONSTRAINTS FACING AGROSILVOPASTORAL PRACTICES AMONG HOUSEHOLDS IN OGUN STATE, NIGERIA

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ABSTRACT

Agrosilvopastoral practices are recognized as a link between agriculture, forestry and a sustainable strategy for land management, particularly in tropical and subtropical developing nations. This study examined the limitations of agrosilvopastoral practices among households in Ogun State. A well thought out questionnaire was used to gather information from 240 respondents in total. Descriptive statistics were used to analyze the data collected. Findings revealed that agrosilvopastoral practices were dominated by men, with a mean age and family size of 54 years and 6 persons respectively. More over half (62.25%) of the farmers were literate with mean years of experience in farming being 26years. Result revealed that inadequate capital (1st) is the most serious challenge facing the agrosilvopastoral households, followed by insect infestation (2nd), instability in market price (3rd), inadequate access to land for farming (4th), high cost of transportation (5th), insufficient market centers (6th), source of inputs (7th), technical knowledge (8th), mode of land acquisition (9th) and animal destruction of crops (10th). The study thereby recommends that extension workers from different organizations should educate farmers about agrosilvopastoral practices through seminars, and backing being offered to farmers in the terms of loans, hybrid seeds and credit provision for increased production.

Keywords: Agrosilvopastoral practices, Households, Constraints, Agroforestry, Economic

INTRODUCTION

Since the beginning of agriculture, many farmers have consciously added or preserved trees to their agricultural landscapes. Abundance of trees on farmlands offered protection, cover, food, energy, fodder, and other goods and services for continuous production (Jemal *et al.*, 2018). On tropical fields that had been temporarily abandoned, trees were essential to the fallow vegetation. (McNeely and Schroth, 2006). In addition to offering high-value goods and ecosystem services, woody species serve as the system's climatically resilient backbone (Rizvi *et al.*, 2019). Globally, terrestrial landscapes are being influenced by unsustainable management practices in forestry, agriculture and other human activities, also by climate change and successive chains of events (Iiyama *et al.*, 2014). Agrosilvopastoral practices ranges from taungya farming, alley-cropping, improved fallow in shifting cultivation, multipurpose trees on cropland, aquaforestry etc. and are effectively increasing relevant globally as society has come to acknowledge its roles and services: biodiversity conservation, adaptation and mitigation of climate change, restoration of degraded ecosystems, carbon sequestration and rural development (Akinnifesi *et al.*, 2008). Millions of farmers whose livelihoods are jeopardized by climate change and land degradation, agrosilvopastoral practices present a path to a more sustainable means of subsistence (Schroth *et al.*, 2004). Therefore, it is requisite to explore agrosilvopastoral practices and its constraints among households in Ogun State, Nigeria.

MATERIALS AND METHODS

Study Area

This study was carried out in Ogun State, known as the Gateway State, which was created out of the former Western State of Nigeria on February 3, 1976. Ogun State is situated within the tropics and has an estimated population of 3,751,140 people of which 67% were farmers. The State capital is Abeokuta (National Bureau of Statistics, 2018).

Sample Collection

Based on the presence of agroforestry practices, multistage sampling technique was employed to draw out the sampling site and respondents. The sampling site was the agricultural zones of Ogun State ADP namely, Abeokuta (60), Ijebu-ode (60), Ikenne (60) and Ilaro (60) within the state which gave a total of two hundred and forty (240) respondents for this study (OGADEP, 2016). A well-structured questionnaire was used to acquire relevant data from the respondents.

Data Analysis

Constraints of Agrosilvopastoral Practices

This was chosen in order to assess both the challenges and various benefits of agrosilvopastoral practices in the study area. Respondents select from a pool of five options the one that most closely matches their perspective on this ordered one-dimensional scale. For the scoring, numbers from (1–5) were allocated to each option (Likert, 1932). The options with scoring number are: Strongly agree = 5; Agree = 4; Undecided = 3; Disagree = 2; Strongly disagree = 1. For inferences, class boundaries are:

$0 \leq C \leq 1.4$ = Strongly disagree,

$1.5 \geq C \leq 2.4$ = Disagree,

$2.5 \geq C \leq 3.4$ = Undecided,

$3.5 \geq C \leq 4.4$ = Agree,

$4.5 \geq C \leq 5.0$ = Strongly agree (i)

Where, C = Constraints of agrosilvopastoral practices.

RESULT AND DISCUSSION

The result of the socio-economic characteristic of the respondents presented in Table 1 revealed that the mean age of the agrosilvopastoral households was 54 years which showed that the majority of the households were still in their active years. Male dominated the enterprise than female counterparts. This finding is in accordant with those of Lutomia *et al.*, (2019) and Olumeh *et al.*, (2021). The mean household size of the agrosilvopastoral households was 6 persons which implied that the majority of the households had

a fairly large household size which they could employ in their business when they are available (Table 1). A larger portion of the agrosilvopastoral households had formal education and this might inform their decision to adopt innovative practices that will improve their production as well as their profitability. A rural community cannot promote development without educated individuals, because education has a substantial impact on the allocation and mobilization of various capitals

(Olojede *et al.*, 2013). This study further revealed in Table 1 that the mean years of farming experience of the agrosilvopastoral households was 26 years which revealed that the majority of the households were well experienced. The implication was that they were more experienced to cope with risks emanating from the enterprise which will at the long run influence their productivity and profitability.

Table 1: Socioeconomic Characteristic of Agrosilvopastoral Households

Variable	Frequency	Percentage	Mean
Age (years)			
21-30	8	3.33	54
31-40	28	11.67	
41-50	72	30.00	
51-60	76	31.67	
>60	56	23.33	
Total	240	100.00	
Gender			
Female	94	39.17	
Male	146	60.83	
Total	240	100.00	
Household size (persons)			
1-3	55	22.92	6
4-6	80	33.33	
7-9	82	34.17	
9-12	17	7.08	
>12	6	2.50	
Total	240	100.00	
Level of education			
Non-formal	93	38.75	
Primary	74	30.83	
Secondary	50	20.83	
Diploma/NCE/BSc.	13	5.42	
Adult education	10	4.17	
Total	240	100.00	
Farming experience (years)			
1-10	38	15.83	26
11-20	40	16.67	
21-30	84	35.00	
31-40	54	22.50	
>40	24	10.00	

Source: Data Analysis, 2022

The result of the constraint facing agrosilvopastoralists presented in Table 2 were ranked; the result showed that inadequate capital (1st) was the most serious challenge facing the agrosilvopastoralists, followed by pest infestation (2nd), instability in market price of produce (3rd), difficulty in accessing land for farming purpose (4th), high transportation cost (5th), insufficient market centers (6th), difficulty in sourcing for quality inputs (7th), lack of technical knowledge (8th), mode of land acquisition (9th) and destruction of crops by animals (10th). According to Onwuebele (2015), the absence of basic social amenities and basic utilities (like

transportable drinking water, health facilities, good roads, schools, telecommunication, irrigation, etc.) hinders people's potential for productivity, furthering their descent into extreme poverty in Nigeria. Michael *et al.*, (2021) discovered that a lack of farming inputs had an effect on agricultural operations in a study done in Adamawa State, Nigeria. The necessity to boost earnings for the majority of the rural poor is one of the most significant causes that led economists to stress increasing agricultural production as an essential element of a successful rural development strategy (Maniriho and Nilsson, 2018).

Table 2: Constraints facing Agrosilvopastoral Practices among Households

Constraints	Score	Rank
Insufficient Capital	342	1 st
Insect infestation	342	2 nd
Instability in market price	377	3 rd
Inadequate access to land for farming	379	4 th
High cost of transportation	384	5 th
Insufficient market centers	408	6 th
Source of inputs	420	7 th
Technical knowledge	436	8 th
Mode of land acquisition	463	9 th
Animal destruction of crops	511	10 th

Source: Data analysis, 2022

CONCLUSION

Agrosilvopastoral practices are a substitute cultivation strategy which has been embraced by both small and large scale farmers. This research revealed that insufficient capital is the most serious challenge facing the agrosilvopastoralists in the study area. Farmers should be urged to create groups or cooperative organizations so they can be given the opportunity to access various types of capital that can improve their standard of living.

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