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Arable Crop Farmers' Use of Private Extension Services in Ondo State, Nigeria

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Abstract
The study assessed the arable crop farmers' use of private extension services in Ondo State, Nigeria. A multi-stage sampling procedure was used in selecting 95 respondents in the study area and data were collected through an interview schedule. Data analysis was carried out using percentages and mean statistics. The study revealed there were few private extension service providers, and most (44.2%) of the arable crop farmers did not use private extension services. It also revealed that the respondents had an unfavourable attitude toward private extension services with a grand mean of 2.82. It was further revealed that only a few private extension providers were available to arable crop farmers. The farmers also believed that private extension could not provide all the services required for their agricultural production. The main constraint to private extension was that services of private extension were often geared to meeting the providers' organizational needs ($\bar{x} = 4.12$). *The study concluded that farmers had unfavourable attitude to private extension. The study recommended a pluralistic approach to extension services and increased awareness to enlighten farmers about the importance of private extension services.*

Introduction

The quality of information disseminated to farmers is useful in determining the effectiveness of agricultural extension services which in turn provides necessary knowledge to farmers for improved production. Agricultural extension service which is often named to include advisory services is the practice of supplying farmers with scientific knowledge through education means with the ultimate aim of improving farm output (Wasantha, 2022).The agricultural extension goes beyond the transfer of technology to include activities such as disseminating knowledge on climate change, gender equality advocacy, and facilitating market access (Abhijeet et al., 2023). Agricultural Extension can therefore be referred to as a set of interactions through different channels that results in an improvement in farmers' productivity and welfare. Throughout the world, agricultural extension services exist in diverse forms with multiple functions. Primarily among these is the facilitation of learning by extending the latest scientific knowledge and technologies through education means in a non-formal setting with the aim of improving agricultural productivity and increasing farmers' income (Agwu et al., 2023). Agricultural extension has the capacity of providing an equitable and sustainable form of agriculture that is beneficiary to both the people and

its lands (Abhijeet et al., 2023). The government is the key player in extension services in Nigeria and even in the world's developed countries (Abhijeet et al., 2023).

Agricultural extension is generally inefficient in Nigeria owing to the availability of few skilled agents making it difficult for extension to attend to the various extension needs of the clients (Agwu et al., 2023). The population growth, the need to feed more people and competition for scarce resources necessitate the need for private extension services. Akinnagbe, et al., (2024), affirmed that the poor state of agricultural extension in Nigeria calls for an urgent pluralistic extension system. The involvement of the private sector in extension service delivery now involves agribusiness companies providing specific technical advice related to their products, as well as providing consultancy in value addition and market-oriented agriculture making extension service necessary to both urban and rural beneficiaries for improved quality of life (Agwu et al., 2023).

Determining the usage and attitude of users of a particular service helps to understand the behaviour and motivations behind users' decisions. It sheds light on every aspect of the consumers' experience. Policymakers can apply this understanding to make informed decisions about how to offer customized service delivery that fosters innovation adoption and good agricultural practices and also establish strategies that offer improved customer outreach (Masanja et al., 2023; Rodgers, 2023).

It is, therefore, important to measure arable crop farmers' use of private extension services because these farmers are among the key stakeholders in the pluralistic extension system. Specifically, the study ascertained the type of arable crops grown by farmers; determined the cost of accessing extension services; examined the attitudes of arable crop farmers toward private agricultural extension services; identified the types of extension services demanded by farmers through the private agricultural extension services; and identified the constraints to accessing private agricultural extension services.

Methodology

The study was conducted in Ondo State, Nigeria. It lies on longitude 5°05'E and 7°10'N coordinates. Ondo State includes a mangrove-swamp forest near the Bight of Benin, a tropical rain forest in the center part and a wooded savannah on the gentle slopes making the soil suitable for the cultivation of many crops. The major arable crops in the state include rice, maize, cocoyam yams, corn, cassava and vegetables. There are presence of private agricultural extensions service providers in Ondo State especially those in partnership with the ADP to boost extension service delivery. Such NGOs and donor agencies include Farmers' Development Union (FADU), GIZ, and USAID. The study population included all arable crop farmers in the State. Multistage sampling techniques was to select the study's respondent. Three Local Government Areas (LGAs) were randomly selected from the 18 LGAs, namely Akure South, Akure North and Akoko South West. Using stratified sampling technique, three, two and two communities were selected from each LGA respectively. List of farmers were collected from the ADP offices, and using a random selection sampling technique 41 farmers were selected from the three communities in the first LGA, 28 respondents from the two LGA in the second LGA, and 26 farmers from the two communities in the third LGA to make a total of 95 respondents. One key informant was selected from each LGA to buttress the information supplied by the respondents.

The cost of accessing extension services was determined by asking the respondents how much they paid for each service. Types of crops planted were identified through a yes or no response. Attitudes in this study describe the degree to which farmers were favorably or unfavorably undisposed to extension services provided by private organizations. A list of 12 attitudinal statement used for this study were from experts in the extension field, informal meetings with farmers and related literature. The attitude was measured on a five-point Likert-type scale of strongly agreed, agreed, undecided, disagree and strongly disagreed and scored as 5, 4, 3, 2 and 1 respectively. A total of 15 points was obtained and then divided by 5 to arrive at a mean cut-off point of 3 to decide if a statement shows favourable or unfavourable attitude towards private extension services. The grand mean was further used to decide if a farmer shows favourable or unfavourable attitude towards private extension services. The constraints to accessing private agricultural extension services by the respondents were identified. Respondents were presented with a list of six constraints to score on a 5-point Likert-type scale of extremely (5), very (4), moderately (3), rarely (2) and not at all (1). The collected data were analyzed using mean statistics and presented using frequency distribution and graphical representation as appropriate.

Results and Discussion

Major Crops Cultivated by the Arable Farmers

Figure 1 shows that the majority (97.9%) of the farmers planted more than three arable crops together. Maize and cassava cultivated together (93.7%), and cassava, yam, and maize cultivated together (82.1%) were the most common form of mixed arable crops grown by the respondents. The most single cultivated crop was cassava (73.7%) while the least single cultivated crops were cowpea (29.5%) and watermelon (21.1%). This implies that most arable crop farmers practiced multiple cropping. This finding is in tandem with Ayodele and Akindele (2017) who found that farmers were involved in cultivating variety of arable crops with cassava, maize and yam ranking as the most cultivated arable crops in Ondo State.

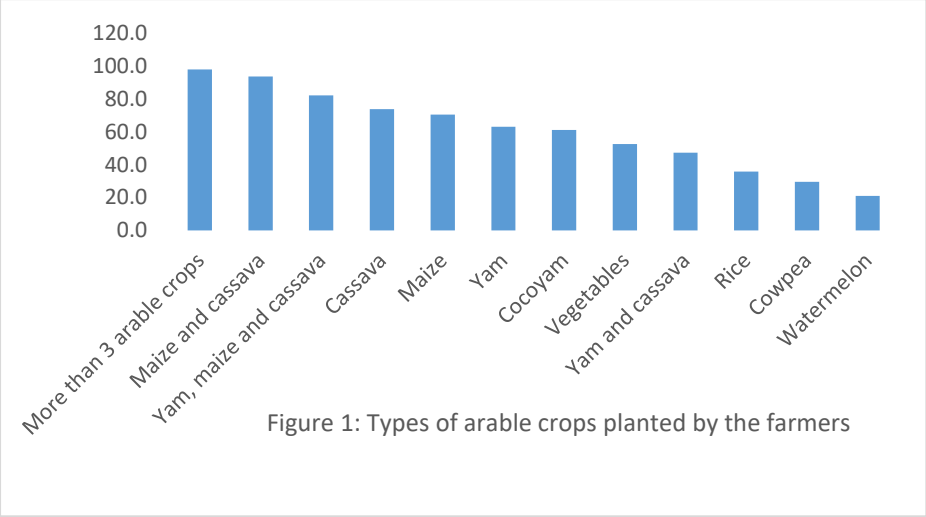

Figure 1: Types of arable crops planted by the farmers

Source: Field survey, 2023

Cost of Accessing Extension Services by the Respondents

. Table 1 shows that the majority (82.1%) of the farmers were not certain of the cost of accessing extension services. The highest amount paid was ₦5000. This implied that the cost of access to extension activities is affordable even though the majority of them were not certain of how much they were to pay or the amount they have paid in the past. These findings agree with that of Akinnagbe et al., (2024) which states that extension agents believe that extension services should be rendered free to farmers or should mostly cost between ₦100 to 1000.

Table 1.Cost of accessing extension services by the respondents

Cost (₦)	Percentage	Mean
Not certain	65.1	
<1000	15.4	
1001 - 2500	8.5	
2501 – 4000	4.5	5,000
4001 – 5500	4.3	
> 5500	2.2	
Total	100	

Source: Field survey, 2023

Types of Private Agricultural Extension Service Providers Utilized by Farmers

Results in Table 2 reveal that there were only few active Private Agricultural Extension Service Providers (PAES) in the study area. The implication of the few number of organizations that are offering private extension services in the study area will mean low accessibility to private extension services. Most of the respondents (44.2%) did not utilize any private extension service from the available service providers in the study area. This shows a greater proportion did not use PAES. A key informant interviewed during the study said "*Many farmers were not aware there are private agricultural extension service providers and the need to pay for extension services. Moreover, some of us don't really have trust in the services of private agricultural extensions service providers because of our experiences in the past".* The most utilized PAES was the Farmers Development Union (27.4%). This shows that farmers believe in their associations and this reiterates the fact that a lot can be achieved through farmers' groups because the farmers themselves are the major stakeholders and they will render services that are peculiar to their needs. Also, 26.8% of the farmers utilized agencies with special projects (GIZ, USAID and CAVA). Most of these agencies were donor agencies and their services attracted little or no cost and hence the relative high patronage and utilization. Lead initiative group and Farm help were equally utilized with 17.9% and 10.5% respectively.

Table 2. Types of private agricultural extension service providers utilized

Types of PAES	Percentages*
Farmers Development Union	27.4
Agencies with Special projects	26.8
Lead initiative group	17.9
Farm help	10.5
None	44.2

Source: Field survey, 2023 *Multiple responses

Attitudes of Farmers towards Private Agricultural Extension Services

Results in Table 4 show that the attitude of the respondents towards private extension services were service delivery with the private extension is demand driven" ($\bar{x}$ = 4.63), timelines and dependability in service delivery of private extension, ($\bar{x}$ = 3.87) and farmers are willing to pay for private extension services ($\bar{x}$ = 3.21). This implies that farmers are well disposed to the use of private extension if the service rendered meets the needs of the farmers. Farmers were also favourably disposed to the fact that there are timelines and dependability in service delivery of private extension services. This is in contrast to the public extension service delivery characterized by its bureaucratic nature of operations (Agwu et al., 2023). The study further reveals that farmers were willing to pay for private extension services though at a low cost as earlier revealed in the study. This implies that farmers are aware of the importance of extension services in agricultural activities, hence, the willingness to pay. This finding is consistence with that of Masanja et al., (2023), who found out 58.3% of the farmers in his study area were willing to pay for private extension services. Arable crop farmers are satisfied with private extension services ($\bar{x}$ = 2.01), accessibility to private extension services is easy ($\bar{x}$ = 2.00) and extension services offered by private extension is enough to meet farmer's needs ($\bar{x}$1.54) were the attitudinal statements which farmers were least favourable. This implies farmers do not have easy access to private extension services anytime they so desire. This could be attributed to the low price farmers are willing to pay for private extension service as confirmed in the focus group discussion conducted during the study. This therefore makes the services of private extension not satisfying to the farmers. As further confirmed during the focus group discussion, farmers were not favourably disposed to the statement that extension services offered by private extension are enough to meet farmer's needs because they believe part of the responsibility of the government is to provide extension services to farmers to assist them in their agricultural activities. Farmers strongly believe that both public and private extension services are needed to boost agricultural production. This is in tandem with the assertion of Akinnagbe et al., (2024) and Agwu et al., (2023), that pluralistic extension is the way forward in extension service delivery.

The grand mean of farmers' attitude ($\bar{x} = 2.82$) reveals that generally, arable crop farmers were not favourably disposed to the use of private extension services. Akinnagbe et al., (2024), poised that extension workers were of the opinion that extension services should not be privatized. On the contrary, Masanja et al., (2023), also asserted that the majority of farmers were favourably disposed of services provided by private extension organizations.

Table 3. Attitudes of farmers toward private agricultural extension services

Attitudes	$\bar{x}$	S.D
Service delivery is demand-driven with private extension	4.63	1.06
Timelines and dependability in service delivery of private extension	3.87	0.60
Farmers are willing to pay for private extension services	3.21	0.46
Private extension used a bottom-up approach in need identification	2.94	0.24
Training and learning experience are more effective with private extension	2.93	0.40
The effectiveness of private extension services brings a good combination of Indigenous knowledge and improved practices in crop production	2.92	0.23
The private extension uses a combination of more teaching methods	2.83	0.42
There is higher crop production as a result of access to private extension	2.83	0.31
Private extension provides adequate channels and facilities for disseminating information to farmers	2.17	0.24
Arable crop farmers are satisfied with private extension services	2.01	0.22
Accessibility to private extension services is easy	2.00	0.24
Extension services offered by private extension is enough to meet farmer's need	1.54	0.29

Grand Mean	2.82

Source: Field survey, 2023

Constraints to Accessing Private Agricultural Extension Services

Table 4 presents the constraints to accessing private agricultural extension services by the respondents. The greatest constraint was that services provided by private extension were often geared to meeting the providers' organizational needs ($\bar{x} = 4.12$). An example of this is Olam Nigeria Limited which trains cocoa farmers on producing premium cocoa. Farmers who were not producing the types of crops specified by the organization were often secluded from services rendered. The remoteness of the farmers' locations for their agricultural activities also constituted a constraint ($\bar{x} = 3.42$). There was the problem of poor road networks which made access difficult for the service providers. Timeliness in the delivery of inputs and services also constituted a major problem ($\bar{x} = 3.91$).Agricultural activities are often time-bound, and the inability of private extension to get services, especially inputs to the farmers at the required time made the farmers a bit resentful of private extension services. Though the cost of accessing private extension and inadequate funds were seen as constraints, this was the least ($\bar{x} = 2.52$) constraint identified. It implies that farmers did not really show resistance to paying for extension services. If farmers could see the benefits, they would be willing to pay for extension services. The findings of this study is also in line with that of Masanja et al. (2023) who identified untimely service delivery as a major constraint to access of private agricultural extension services.

Table 4 Constraints to accessing private agricultural extension services

Constraints	$\bar{x}$	S.D
Inadequate private extension service providers	3.33	0.49
Lack of funds to use private extension services is high	2.52	0.29
Services of private extension are often to meet the providers' organizational needs	4.12	0.43
Untimely delivery of inputs	3.91	0.24
Farmers' remote locations and poor infrastructures	3.42	0.61
Private extension services not very interested in arable crops	3.84	0.32

Source: Field survey, 2021

Conclusion and Recommendations

Farmers have unfavourable attitudes to private extension services and they believed private extension could not provide all the services required for their agricultural production. There were few private extension service providers making accessibility to private extension uneasy. The major private extension provider was from the farmers' association, reiterating the influence of farmers group in meeting farmer's needs. The main constraints to private extension were that services of private extension were often geared to meeting the providers' organizational needs and untimely delivery of inputs. The study therefore recommends pluralistic approach to extension services by the farmers associations and the NGOs since farmers were willing to pay for private extension services. This will ensure the efforts of the public extension services are well complemented.

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