

# Challenges Faced by Farmers and Extension Personnel in Effective Agricultural Extension Delivery in Ondo State, Nigeria

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## Abstract

This research investigated the constraints faced by contact farmers and extension personnel in relation to the effectiveness of agricultural extension service delivery in Ondo State, Nigeria. One hundred (100) contact farmers and twenty (20) extension agents were selected using a multistage sampling technique. Data was collected from June to July 2023 and analysed using descriptive and inferential statistics. The Contact farmers were predominantly aged (56%), mostly male (64%), with secondary education (42%). Extension personnel were mostly male (60%), with tertiary education (50%). Contact farmers identified inadequate training of extension personnel ( $\bar{x} = 1.86$ ) and lack of trust in extension agents ( $\bar{x} = 1.65$ ) as constraints to the effectiveness of extension services. Extension officers' constraints included high input cost ( $\bar{x} = 2.0$ ) and lack of trust in extension agents ( $\bar{x} = 2.0$ ). No significant relationship was found between the socioeconomic characteristics of contact farmers, extension personnel, and constraints to effectiveness of extension services. However, a significant relationship was confirmed between the constraints faced by contact farmers and extension personnel regarding the effectiveness of extension services ( $r = 0.678, p < 0.05$ ). Contact farmers suggested equipping extension centers with instructional resources ( $\bar{x} = 1.26$ ) and recruiting more extension officers ( $\bar{x} = 1.20$ ). The study recommends increasing the number of extension officers, and providing them with supportive tools and other resources.

Keywords: Agricultural extension, Contact farmers, Extension personnel, Constraints, Ondo state

## 1 Introduction

Agricultural extension is the transfer of agricultural information and technology to farmers to increase production and improve productivity (Danso-Abbeam et al., 2018). It plays a central role in sharing agriculture-related information with farmers to enhance agricultural outcomes (Yahaya, 2020). According to (Apantaku et al., 2015), agricultural extension officers disseminate research outputs, improved techniques, and innovations aimed at transforming agricultural production to achieve food security and enhance livelihoods in agrarian communities (Maake & Antwi, 2022). (Musa et al., 2023) argue that the primary role of extension services is to disseminate research-based knowledge and new technologies to farmers, enabling them to make informed decisions that positively impact their well-being. According to (Okello et al., 2023) when farmers lack access to the information basket required to maximize crop yields or face avoidable or recurrent losses due to knowledge deficits, the frustration might drive them to abandon farming business altogether in favor of alternative livelihoods, thereby undermining

agricultural production.

Despite the crucial role of extension services in the agricultural sector, several challenges persist (Abraham et al., 2022) as perceived by both farmers and extension officers (Ezima et al., 2023). Farmers often highlight inadequate access to information, limited credit access, deplorable infrastructure, and inadequate extension agents as constraints to the delivery of agricultural extension services (Abraham et al., 2022). Conversely, extension personnel typically cite inadequate funding, insufficient equipment and logistics, insufficient training and retraining, and the absence of clear policies and guidelines as the major constraints (Ezima et al., 2023).

Based on the foregoing, this study explores the constraints faced by contact farmers and extension personnel in Ondo State, Nigeria, in the delivery of agricultural extension services. Specifically, the study aims to: 1) describe the socioeconomic characteristics of contact farmers and extension personnel; 2) ascertain the perceptions of contact farmers and extension personnel regarding the effectiveness of agricultural extension services;

and 3) assess respondents' solutions to address the constraints hindering the effectiveness of agricultural extension services in the study area.

#### Hypotheses:

1. There is no relationship between the socioeconomic characteristics of contact farmers and constraints affecting the effectiveness of agricultural extension services.
2. There is no relationship between socioeconomic characteristics of extension personnel and constraints affecting the effectiveness of agricultural extension services.
3. There is no relationship between the constraints faced by contact farmers and those faced by extension personnel in relation to the effectiveness of agricultural extension services.

## 2 Methodology

Ondo State is located in South-western Nigeria. It is the 25th largest state by landmass and the 19th most populous in Nigeria. It covers an area of 295 km<sup>2</sup>, and had a population of 176,372 according to the 2006 census. The state is predominantly inhabited by the Yoruba ethnic group, whose major occupation is farming. Situated entirely within the tropics, the state features tropical vegetation and is marked by two seasons: the rainy season (April – October) and the dry season (November – March). The state is mostly rural, with rainforest vegetation that supports the production of food crops like maize, yam, and cassava. Therefore, the people are mainly farmers and typically practice multiple cropping systems.

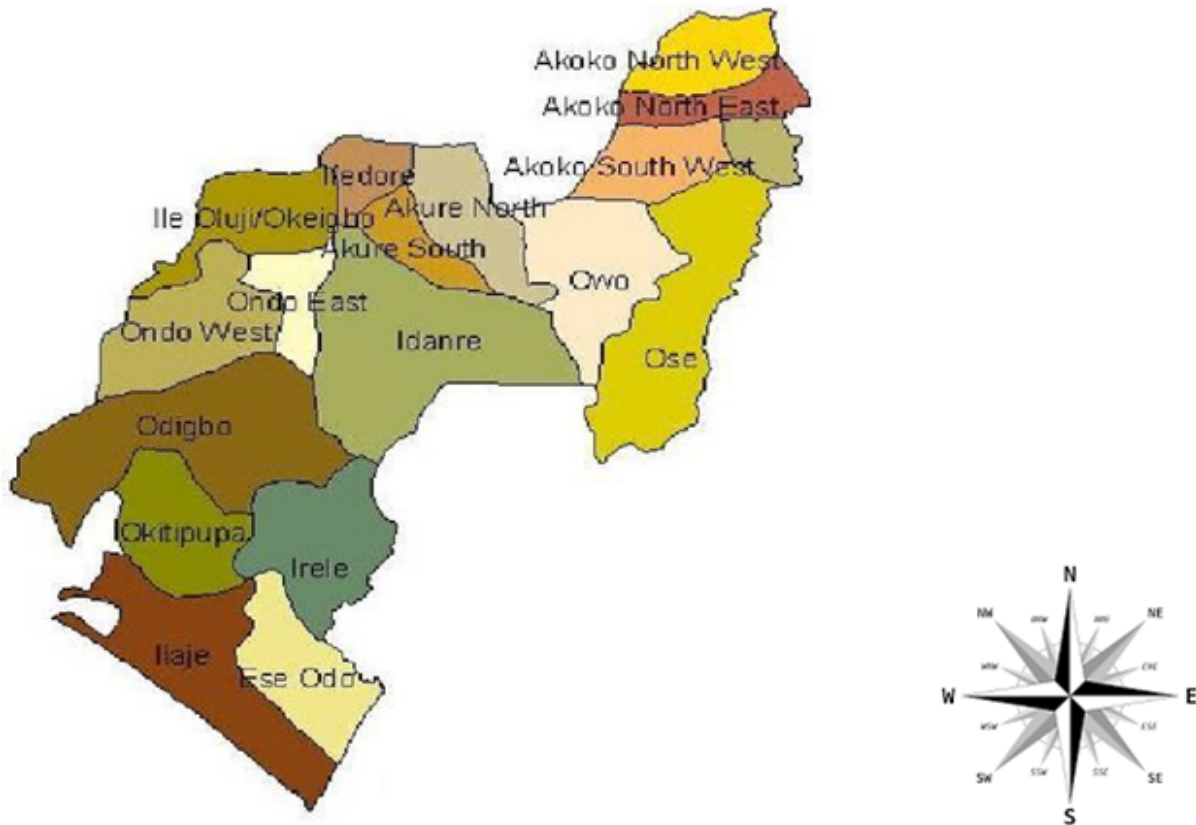
A multistage sampling procedure was used to select the respondents for this study. Ondo state was purposively selected in the first stage due to the prevalence of extension service activities in the state. The second stage involved a random selection of five local government areas (LGAs) from the eighteen LGAs in Ondo State. In the third stage, 20 respondents were randomly selected from each of the five LGAs, totaling 100 contact farmers. The agricultural zones in the state are Owo and Ondo zones, with eight and ten blocks, respectively, and a total of 51 extension agents. However, 20 extension agents were randomly selected as respondents for the study, making a

total of one hundred and twenty (120) respondents. Quantitative data was obtained through primary data collection from June to July 2023 using a well-structured, validated questionnaire. Constraints to effectiveness of agricultural extension services were measured on a 3-point Likert scale: not a constraint (3), mild constraint (2), and severe constraint (1), using a nine-item scale that included: inadequate extension agents, inadequate knowledge and skills of extension agents, poor infrastructure, high input costs, lack of trust in extension agents, limited access to information and technology, inadequate resources, low literacy rate, and inadequate training of extension personnel. Perceptions of agricultural extension services were measured using a 4-point Likert scale, with the following responses: (4) strongly agree, (3) agree, (2) disagree, & (1) strongly disagree. Items included: agricultural extension services enhance farming activities, inadequate extension officers do not undermine effectiveness of extension service delivery, agricultural extension services provide training to farmers on improved farming techniques, extension services can succeed without government backing, and poor transportation network does not affect extension service delivery, among others. Respondents were asked to indicate possible solutions to the constraints on the effectiveness of agricultural extension services using Yes(1) and No(2) response format, with a six item scale including: "Agricultural extension hubs should be furnished with instructional resources", "Farmers should collaborate with extension officers and embrace the services they provide", "Extension programs should be well planned before being disseminated to farmers", "Coverage areas or jurisdiction of extension officers should not be too wide", "More extension officers should be recruited", and "Greater financial resources should be extended to extension officers to facilitate their work". Descriptive and inferential statistics were used to analyse the data. The former involved frequency distribution, mean, and percentages. Correlation analysis was used to test the hypotheses.

## 3 Results and Discussion

### 3.1 Socioeconomic characteristics of the respondents

Table 1 shows that the majority (56%) of the farmers and 40% of the extension agents were in



**Figure 1:** Map of Ondo State, Nigeria. Source: Mapcarta (2023)

the productive age bracket of 36-45 years. These results agree with (Apantaku et al., 2015), who also discovered that the farmers in their study area were in the productive age 20 to 55 years, while the extension agents were aged between 40 and 60 years. The respondents for this study were mostly males (64% farmers and 60% extension agents). The preponderance of male farmers reflects the heavily manual and tedious nature of farming in Nigeria, which requires considerable energy to accomplish. This aligns with the findings of (Ibitoye, 2015), that men dominate farming activities in Kogi State. Most (66%) of the farmers and 100% of the extension agents were married, which is a common feature of rural settlements in Nigeria where early marriages are prevalent. It also suggests that both farmers and extension workers perceived incomes from their occupations as sufficient to cope with marital responsibilities. This finding is substantiated by (Ikoyo-Eweto et al., 2023), who also found that most of the respondents in their study on rural farmers' access

to extension services in Delta State, Nigeria, were married. Approximately half (52%) of farmers and 55% of the extension agents were Christians, which is not unusual in Southwestern Nigeria, where the population is evenly divided between Christians and Muslims. (Anachinaba et al., 2022) also found that almost three-fifth (59%) of the respondents were Christian in a study on farmers' knowledge and perception in Ghana.

The analysis of the respondents' average monthly income reveals that about 51% of the farmers earned monthly income above N150, 000, while approximately half of the extension workers also earned above N150, 000. Meanwhile, 27% of the farmers earned between N100, 001 and N150, 000, with 50% of the extension workers falling within the same income bracket. Only about 11% of the farmers earned less than N150,000. This result indicates relatively high earnings for both the farmers and extension agents. (Anang et al., 2020) confirmed that agricultural extension increases farm income among smallholder agrarian

households in Ghana. Approximately half (54%) of the farmers had between 5-10 years of experience in farming, while the majority (65%) of extension workers had over 11 years of job experience. This considerable level of experience indicates that both the farmers and extension agents are likely to have attained significant experience-led proficiency in their work. This corroborates the finding of (Antwi-Agyei & Stringer, 2021), who reported similar years of experience for smallholder farmers in northern Ghana. About 42% of the farmers and 20% of the extension agents had secondary education, while 11% of the farmers and 50% of the extension agents had tertiary education. However, 19% of farmers had no formal education. The high educational levels of extension officers and some farmers would likely enhance their capacity to communicate and assimilate extension information effectively. This result aligns with (Oyetunde-Usman et al., 2021), who affirmed that education enhances the ability of extension officers to communicate new farming techniques effectively to smallholder farmers in Nigeria.

### 3.2 Perception of contact farmers and extension personnel on the effectiveness of agricultural extension services

Table 2 reveals that most contact farmers disagreed with the following three statements: "Extension services can be effective without government support" ( $\bar{x} = 3.24; 3.0$ ), "Poor transport infrastructure does not affect extension services" ( $\bar{x} = 2.74; 2.55$ ), and "Lack of capital does not weaken the effectiveness of extension service delivery" ( $\bar{x} = 3.11; 3.10$ ). The results further indicate that the majority (76%) of the farmers and all the extension agents (100%) affirmed that extension services provide training to farmers on improved farming techniques. This finding aligns with (Ikoyo-Eweto et al., 2023), who emphasised that training on farming techniques equips farmers with necessary farm related information. Furthermore, the majority (97%) of the farmers and extension agents (95%) agreed that lack of motivation undermines the effectiveness of extension services. Similarly, about 81% of the farmers and 95% of extension agents believed that agricultural extension services positively impact farming activities. (Rahman et al., 2021) identified several challenges limiting the effectiveness of extension services, including poor

communication skills among extension workers, inadequate resources, and difficulties in reaching resource-rich farmers in Bangladesh.

The results further reveal that about 78% of farmers and 100% of extension agents disagreed with the assertion that poor transportation systems do not impede extension service delivery. Most (76%) of the farmers and all extension agents (100%) disagreed with the notion that extension services can succeed without government backing. About half of the farmers and 15% of extension agents disagreed with the statement that inadequate extension officers do not undermine the effectiveness of extension service delivery. Lastly, about 97% of farmers and 100% of extension agents disagreed with the notion that funding does not impede the effectiveness of extension services. This suggests funding problems as a significant constraint to the effectiveness of agricultural extension services. This finding is validated by (Apantaku et al., 2015), who concluded that Nigeria's agricultural extension system encounters challenges due to funding and logistical constraints.

### 3.3 Contact farmers and extension workers' constraints to the effectiveness of agricultural extension services

As reported in Table 3, the major constraints to the effectiveness of extension service for the contact farmers included inadequate training of extension personnel ( $\bar{x} = 1.86$ ), lack of trust in extension agents ( $\bar{x} = 1.65$ ), low literacy rate ( $\bar{x} = 1.56$ ), and limited access to information and technology ( $\bar{x} = 1.53$ ). The major constraints identified by the extension officers as displayed in Table 4 include high input cost ( $\bar{x} = 2.0$ ), lack of trust in extension agents ( $\bar{x} = 2.0$ ), and inadequate training of extension personnel ( $\bar{x} = 2.0$ ). (Apantaku et al., 2015) also found that lack of equipment, shortage of personnel, and inadequate planning were severe constraints to the effectiveness of agricultural extension services in Oyo State, Nigeria.

### 3.4 Solutions to constraints to effectiveness of agricultural extension services by contact farmers and extension agents

Table 5 reveals that the suggested solutions to constraints impeding the effectiveness of agricultural extension services by the contact farmers.

These include: furnishing extension hubs with instructional resources ( $\bar{x} = 1.26$ ), recruiting more extension officers ( $\bar{x} = 1.20$ ), encouraging farmers to collaborate with extension officers and embrace the services they provide ( $X = 1.18$ ), providing greater financial resources to extension officers to facilitate their work ( $\bar{x} = 1.14$ ), ensuring coverage areas or jurisdiction of individual extension officers are not too wide ( $X = 1.12$ ), and ensuring extension programs are well planned before being dissemination to farmers ( $\bar{x} = 1.10$ ). For extension personnel, (Table 6) their suggested solutions include furnishing agricultural extension hubs with instructional resources ( $\bar{x} = 1.5$ ), encouraging farmers to collaborate with extension officers and embrace the services they provide ( $\bar{x} = 1.5$ ), and ensuring extension programs are well planned before being dissemination to farmers' ( $\bar{x} = 1.5$ ). Similarly, (Oyegbami, 2024) recommended that agricultural authorities should employ more extension personnel to bridge the farmer-extension gap and incentivize them for greater efficiency.

### 3.5 Hypothesis testing

#### 3.5.1 Relationship between socio-economic characteristics of contact farmers and constraints to the effectiveness of agricultural extension services

Table 7 revealed that the socioeconomic characteristics of the contact farmers show no significant ( $p > 0.05$ ) relationship with the constraints to the effectiveness of agricultural extension services. This indicates that the constraints faced by the farmers are not influenced by their socioeconomic conditions. However, contrary findings were reported by (Olaoye et al., 2014), who found a significant association between socioeconomic factors, such as farmers' marital status and level of education, and the nature of extension services available to them.

#### 3.5.2 Relationship between socio-economic characteristics of extension personnel and constraints to effectiveness of agricultural extension services

Table 8 results revealed that the socioeconomic characteristics of extension agents have no significant ( $p > 0.05$ ) relationship with constraints to the effectiveness of agricultural extension services in Ondo State, Nigeria. This implies that the socioeconomic characteristics of extension officers do not constrain the effectiveness of agricultural

extension services in the study area. This result was refuted by (Uzoechi et al., 2022), who found that socioeconomic factors such as age, marital status, and income affected the competency level of extension agents, potentially compromising their effectiveness.

#### 3.5.3 Relationship between contact farmers' and extension personnels' constraint to the effectiveness of agricultural extension services

Table 9 shows a significant positive correlation between the constraints of contact farmers and extension officers to the effectiveness of agricultural extension services ( $r = 0.678, p < 0.05$ ). This implies a direct correlation between farmers' and extension personnel's constraints hindering effectiveness of agricultural extension services, implying that farmers' constraints mirror those of extension officers. In contrast, Cloete et al. (2019) found a significant difference between farmers' and extension officers' constraints to effective extension services in South Africa.

## 4 Conclusion

The study investigated constraints faced by contact farmers and extension personnel regarding the effectiveness of extension service delivery in Ondo State, Nigeria. The results show similarity between the constraints faced by contact farmers and extension personnel to the effectiveness of extension service delivery in Ondo State, Nigeria. These include inadequate training of extension personnel, lack of trust in extension agents, low literacy rate, and limited access to information and technology. The results also highlight that the socioeconomic characteristics of contact farmers and extension personnel were not significantly correlated with the constraints to the effectiveness of extension service delivery in Ondo State, Nigeria. The study recommends that, firstly, the recruitment, training, and equipping of more extension personnel by the Ministry of Agriculture would assist in promoting effective extension service delivery. Secondly, extension programs should be properly conceptualized, planned, and implemented by the Agricultural Development Agencies and Donor Community for optimum effectiveness. Thirdly, extension officers should be well-motivated with the requisite remunerations and necessary incentives by the Ministry of Agriculture to enhance efficiency and service

delivery of extension services in Ondo State,  
Nigeria.



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**Table 1:** Socioeconomic Characteristics of Respondents

| <b>Variables</b>              | <b>Contact farmers</b> |          | <b>Extension agents</b> |          |
|-------------------------------|------------------------|----------|-------------------------|----------|
|                               | <b>Freq</b>            | <b>%</b> | <b>Freq</b>             | <b>%</b> |
| <b>Age</b>                    |                        |          |                         |          |
| 25-35                         | 11                     | 11.0     | -                       | -        |
| 36-45                         | 56                     | 56.0     | 08                      | 40.0     |
| 45 and above                  | 33                     | 33.0     | 12                      | 60.0     |
| <b>Sex</b>                    |                        |          |                         |          |
| Male                          | 64                     | 64.0     | 12                      | 60.0     |
| Female                        | 36                     | 36.0     | 08                      | 40.0     |
| <b>Marital status</b>         |                        |          |                         |          |
| Single                        | -                      | -        | -                       | -        |
| Married                       | 66                     | 66.0     | 20                      | 100.0    |
| Divorced                      | 15                     | 15.0     | -                       | -        |
| Widowed                       | 19                     | 19.0     | -                       | -        |
| <b>Religion</b>               |                        |          |                         |          |
| Christian                     | 52                     | 52.0     | 11                      | 55.0     |
| Muslim                        | 48                     | 48.0     | 09                      | 45.0     |
| <b>Average monthly income</b> |                        |          |                         |          |
| Less than N50,000             | 11                     | 11.0     | -                       | -        |
| N50,000-100,000               | 11                     | 11.0     | -                       | -        |
| N100,001-150,000              | 27                     | 27.0     | 10                      | 50.0     |
| Above N150, 000               | 51                     | 51.0     | 10                      | 50.0     |
| <b>Level of education</b>     |                        |          |                         |          |
| No formal education           | 19                     | 19.0     | -                       | -        |
| Adult education               | 12                     | 12.0     | 06                      | 30.0     |
| Primary education             | 16                     | 16.0     | -                       | -        |
| Secondary education           | 42                     | 42.0     | 04                      | 20.0     |
| Tertiary education            | 11                     | 11.0     | 10                      | 50.0     |
| <b>Years of experience</b>    |                        |          |                         |          |
| Less than 5                   | 07                     | 7.0      | 07                      | 35.0     |
| 5-10                          | 54                     | 54.0     | -                       | -        |
| 11 and above                  | 39                     | 39.0     | 13                      | 65.0     |

Source: Field Survey, 2023

**Table 2:** Contact Farmers and Extension Workers' Perceptions of the Effectiveness of Agricultural Extension Services

| Variables                                                                                  |  | Contact farmers |      |    |      |    |      |    |      |           |    | Extension workers |    |      |    |       |    |      |           |  |  |
|--------------------------------------------------------------------------------------------|--|-----------------|------|----|------|----|------|----|------|-----------|----|-------------------|----|------|----|-------|----|------|-----------|--|--|
|                                                                                            |  | SA              |      | A  |      | D  |      | SD |      | $\bar{x}$ | SA |                   | A  |      | D  |       | SD |      | $\bar{x}$ |  |  |
|                                                                                            |  | F               | %    | F  | %    | F  | %    | F  | %    |           | F  | %                 | F  | %    | F  | %     | F  | %    |           |  |  |
| Extension services improve farming activities                                              |  | 33              | 33.0 | 48 | 48.0 | 14 | 14.0 | 5  | 5.0  | 1.91      | 12 | 60.0              | 7  | 35.0 | 1  | 5.0   | -  | -    | 1.45      |  |  |
| Inadequate extension officers do not undermine effectiveness of extension services         |  | 45              | 45.0 | 43 | 43.0 | 12 | 12.0 | -  | -    | 1.67      | 7  | 35.0              | 10 | 50.0 | 3  | 15.0  | -  | -    | 1.80      |  |  |
| Agricultural extension services provide training to farmers on improved farming techniques |  | 76              | 76.0 | 16 | 16.0 | 8  | 8.0  | -  | -    | 1.32      | 20 | 100.0             | -  | -    | -  | -     | -  | -    | 1.00      |  |  |
| Extension services can succeed without government backing                                  |  | -               | -    | -  | -    | -  | 76.0 | 24 | 24.0 | 3.24      | -  | -                 | -  | -    | 20 | 100.0 | -  | -    | 3.00      |  |  |
| Poor transportation network does not affect extension service delivery                     |  | 7               | 7.0  | 14 | 14.0 | 78 | 78.0 | -  | -    | 2.74      | 3  | 15.0              | 3  | 15.0 | 14 | 70.0  | -  | -    | 2.55      |  |  |
| Lack of motivation by extension personnel affects effectiveness of extension services      |  | 45              | 45.0 | 52 | 52.0 | 3  | 3.0  | -  | -    | 1.58      | 13 | 65.0              | 6  | 30.0 | 1  | 5.0   | -  | -    | 1.40      |  |  |
| Lack of capital does not weaken the effectiveness of extension service delivery            |  | -               | -    | 7  | 7.0  | 75 | 75.0 | 18 | 18.0 | 3.11      | -  | -                 | -  | -    | 18 | 90.0  | 2  | 10.0 | 3.10      |  |  |
| Inadequate equipment for extension services affects its effectiveness                      |  | 69              | 69.0 | 28 | 28.0 | 3  | 3.0  | -  | -    | 1.80      | 4  | 20.0              | 16 | 80.0 | -  | -     | -  | -    | 1.80      |  |  |

Source: Field Survey, 2023

 $\bar{x} \geq 2.5$  = favourable response $\bar{x} < 2.5$  = unfavourable response

**Table 3:** Contact farmers perceived constraints to the effectiveness of agricultural extension services.

| Variables                                           | Severe constraint |    | Mild constraint |    | Not a constraint |    | $\bar{x}$ |
|-----------------------------------------------------|-------------------|----|-----------------|----|------------------|----|-----------|
|                                                     | Freq              | %  | Freq            | %  | Freq             | %  |           |
| Poor training of extension officers                 | 42                | 42 | 33              | 33 | 25               | 25 | 1.86      |
| Distrust of extension agents                        | 46                | 46 | 50              | 50 | 4                | 4  | 1.65      |
| Low literacy rate                                   | 35                | 35 | 63              | 63 | 2                | 2  | 1.56      |
| Limited access to information and technology        | 43                | 43 | 54              | 54 | 3                | 3  | 1.53      |
| High input cost                                     | 69                | 69 | 25              | 25 | 6                | 6  | 1.48      |
| Inadequate knowledge and skills of extension agents | 63                | 63 | 32              | 32 | 5                | 5  | 1.43      |
| Poor infrastructure                                 | 61                | 61 | 34              | 34 | 5                | 5  | 1.37      |
| Inadequate extension agents                         | 76                | 76 | 23              | 23 | 1                | 1  | 1.34      |
| Inadequate resources                                | 88                | 88 | 7               | 7  | 5                | 5  | 1.18      |

Source: Field Survey, 2023

Mean response  $\geq 2.0$ **Table 4:** Extension Workers Perceived Constraints to the Effectiveness of Agricultural Extension Services

| Variables                                           | Severe constraint |       | Mild constraint |      | Not a constraint |      | $\bar{x}$ |
|-----------------------------------------------------|-------------------|-------|-----------------|------|------------------|------|-----------|
|                                                     | Freq              | %     | Freq            | %    | Freq             | %    |           |
| High input cost                                     | 0                 | -     | 20              | 100  | -                | -    | 2.00      |
| Lack of trust in extension agent                    | 0                 | -     | 20              | 100  | -                | -    | 2.00      |
| Inadequate training of extension personnel          | 7                 | 35.0  | 6               | 30.0 | 7                | 35.0 | 2.00      |
| Inadequate extension agents                         | 4                 | 20    | 16              | 80.0 | -                | -    | 1.80      |
| Inadequate knowledge and skills of extension agents | 11                | 55    | 9               | 45   | -                | -    | 1.45      |
| Limited access to information and technology        | 17                | 85.0  | 2               | 10.0 | 1                | 5.0  | 1.20      |
| Inadequate resources                                | 18                | 90.0  | 0               | -    | 2                | 10   | 1.20      |
| Poor infrastructure                                 | 20                | 100   | 0               | -    | -                | -    | 1.00      |
| Low literacy rate                                   | 20                | 100.0 | 0               | -    | -                | -    | 1.00      |

Source: Field Survey, 2023

Mean response  $\geq 2.0$ **Table 5:** Contact Farmers' Solutions to Constraints to the Effectiveness of Agricultural Extension Services

| Variables                                                                                            | Yes  |    | No   |    | $\bar{x}$ |
|------------------------------------------------------------------------------------------------------|------|----|------|----|-----------|
|                                                                                                      | Freq | %  | Freq | %  |           |
| Agricultural extension hubs should be furnished with instructional resources                         | 74   | 74 | 26   | 26 | 1.26      |
| More extension officers should be recruited.                                                         | 80   | 80 | 20   | 20 | 1.20      |
| Farmers should collaborate with extension officers and embrace the services they provide             | 82   | 82 | 18   | 18 | 1.18      |
| Greater financial resources should be extended to extension officers to facilitate their work        | 86   | 86 | 14   | 14 | 1.14      |
| Coverage areas or jurisdiction of extension officers should not be too wide for individual personnel | 88   | 88 | 12   | 12 | 1.12      |
| Extension programs should be carefully planned before being disseminated to the farmer               | 90   | 90 | 10   | 10 | 1.10      |

Source: Field Survey, 2023

**Table 6:** Extension Workers' Solutions to Constraints to the Effectiveness of Agricultural Extension Services

| Variables                                                                                            | Yes<br>Freq | %   | $\bar{x}$ |
|------------------------------------------------------------------------------------------------------|-------------|-----|-----------|
| Agricultural extension hubs should be furnished with instructional resources                         | 20          | 100 | 1.5       |
| Farmers should collaborate with extension officers and embrace the services they provide             | 20          | 100 | 1.5       |
| Extension programs should be well planned before being disseminated to the farmer                    | 20          | 100 | 1.5       |
| Coverage areas or jurisdiction of extension officers should not be too wide for individual personnel | 20          | 100 | 1.5       |
| More extension officers should be recruited.                                                         | 20          | 100 | 1.5       |
| Greater financial resources should be extended to extension officers to facilitate their work        | 20          | 100 | 1.5       |

Source: Field Survey, 2023

**Table 7:** Relationship Between the Socio- Economic Characteristics of Farmers and Constraints to the Effectiveness of Agricultural Extension Service Delivery

| Variables                 | Coefficient | <i>t</i> -values | <i>p</i> -values | Decision               |
|---------------------------|-------------|------------------|------------------|------------------------|
| (Constant)                | 117.636     | 0.384            | 0.738            | <b>Not Significant</b> |
| Sex                       | 24.747      | 0-.045           | 0.968            | <b>Not significant</b> |
| Marital status            | 35.907      | -0.136           | 0.905            | <b>Not significant</b> |
| Religion                  | 16.058      | 0.352            | 0.759            | <b>Not significant</b> |
| Educational qualification | 32.116      | 0.302            | 0.791            | <b>Not significant</b> |
| Years of experience       | 21.743      | 0.255            | 0.822            | <b>Not significant</b> |

 $p > 0.05$ 

Source: Field Survey, 2023

**Table 8:** Relationship Between the Socio- Economic Characteristics of Extension Personnel and Constraints to the Effectiveness of Agricultural Extension Service Delivery

| Variables                 | Coefficient | <i>t</i> -values | <i>P</i> -values | Decisions              |
|---------------------------|-------------|------------------|------------------|------------------------|
| (Constant)                | 15.446      | 1.101            | 0.351            | <b>Not Significant</b> |
| Sex                       | 11.513      | -0.449           | 0.684            | <b>Not Significant</b> |
| Religion                  | 10.614      | 0.369            | 0.737            | <b>Not Significant</b> |
| Educational qualification | 7.281       | -0.183           | 0.866            | <b>Not significant</b> |

 $p > 0.05$ 

Source: Field Survey, 2023

**Table 9:** Pearson Product Moment Correlation Result Showing Relationship Between Contact Farmers' and Extension Personnels' Constraint to Effectiveness of Agricultural Extension Services

| Correlates                       | Mean  | StD   | <i>r</i> -value | <i>p</i> -value | Decision    |
|----------------------------------|-------|-------|-----------------|-----------------|-------------|
| Contact farmers' constraint      | 58.11 | 17.79 | 0.678           | 0.047           | Significant |
| Extension personnels' constraint | 13.86 | 6.52  |                 |                 |             |

 $p < 0.05$ 

Source: Field Survey, 2023