



FACTORS INFLUENCING THE ADOPTION OF AGRICULTURAL INSURANCE AMONG CROP FARMERS AS CLIMATE CHANGE ADAPTATION STRATEGY IN BORNO STATE, NIGERIA

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ABSTRACT

The study examined the adoption of agricultural insurance among crop farmers as climate change adaptation strategy in Borno State, Nigeria. Multistage sampling technique was used in selecting 270 respondents for the study. Data were collected using structured questionnaire and analysed using descriptive and inferential statistics. The results reveal that the majority of respondents were between 36 and 49 years old, with a mean age of 37 years. Majority (60.7% and 80%) of the respondents were male and married. The mean household size, farm size, farming experience, and income of the respondents were 7 persons, 2 hectares, 7 years and ₦261,300, respectively. A reasonable proportion (37.8%) of the respondents had secondary education with majority (74.8%) having no access to credit. Most (83.0%) of the respondents in the study area had access to extension services. Majority (69.3%) of the respondents were aware of agricultural insurance with a mean of 2 years of awareness. Half (50.0%) of the respondents sourced information on agricultural insurance from cooperatives. The major type of insurance adopted by the respondents were theft (20.0%), diseases (17.0%), and pest outbreaks (15.9%). The factors influencing the adoption of agricultural insurance in the study area were age ($P < 0.01$), educational level ($P < 0.05$) and access to extension services ($P < 0.01$). The major constraints to the adoption of agricultural insurance in the study area include high premium costs (71.1%) and inadequate awareness (70.0%) to mention few. The study concludes that age, education level and access to extension services were the factors influencing adoption of insurance as climate change adaptation strategy in the study area. The study recommends that the government and non-governmental extension services should embark on sensitization campaign to raise the awareness crop farmers on the importance of insurance and effort should be made by the concern stakeholders to subsidize the premium in order encourage patronage.

Keywords: Agricultural Insurance, Adoption, Climate Change, Adaptation Strategy.

INTRODUCTION

Agriculture remains one of the important economic sectors in many developing countries which Nigeria is not an exception. It is a source of growth and a potential source of investment opportunities for the private sector (Chavas *et al.*, 2019). Two-thirds of the world's agricultural value added is estimated to be created in developing countries (World Bank 2018). Agriculture is an important sector that involves the livelihood of society, providing employment opportunities in rural areas, caring for the landscape, and increasingly affecting environmental issues. However, agriculture is also vulnerable to risks of various origins related to climate change (Tedesco 2018). For an orderly growth of the agricultural, and more broadly the rural sector, it is imperative to put in place a comprehensive package of support services. Agricultural Insurance is a part of this package. Agriculture business has



always been surrounded by risks and uncertainty. Unlike the industrial sector, it is subject to the vagaries of nature. Weather risks are particularly burdensome for smallholder farmers in developing countries, whose livelihoods are largely dependent on agricultural production (IFAD, 2017; Omerkhil *et al.*, 2020).

In addition, due to the increased complexity and variation in agriculture risk, farmers find it very difficult in making rational decisions when faced with risks. Crop insurance is one of the solutions that farmers can use when faced with risks (IFAD, 2017). On the other hand, farmers that are faced with many problems with regards to adopting agricultural insurance. This decision-making process consists of a series of actions and choices over time, through which a farmer evaluates an innovation and decides whether to incorporate it into the existing practices (BNRCC, 2017). Due to the diversity of social, economic and natural factors influencing the adoption of an innovation, making such a decision not a simple process. Interference by the private sector and government policies (subsidized prices, low interest loans and extension campaigns) add to the complexity of the decision process (Sayed *et al.* 2017).

Agricultural productivity is however, declining significantly due to several challenges, such as climate change, high transaction costs, and lack of financial support (Giller *et al.*, 2021). Climate change is any change over time, whether due to natural variability or human activity (Kom *et al.*, 2020). Farmers are seriously affected due to their low adaptive capacity, making them highly vulnerable to climate change (Mujeyi *et al.*, 2020). Adaptation is the only way to be resilient to climate change (Mdoda, 2020). Many approaches have been recommended for mitigating the impacts of climate change on agricultural production, agricultural insurance is one of the more sufficient and widely approach (Mdoda, 2020). The need for involvement to combat climate change effects is crucial (Musafiri *et al.*, 2022), and these interventions include adopting agricultural insurance practices by farmers.

Agricultural insurance is a promising risk management strategy to help farmers adapt to climate change, but its adoption remains low in developing countries, including Nigeria, where only 16.3% of farmers are insured. Previous studies have shown that little or no studies were conducted to assess the adoption of agricultural insurance as climate change mitigation strategy. It is against this backdrop that the study was conducted. The specific objectives of the study were to;

- i. describe the socio-economic characteristics of the respondents in the study area;
- ii. describe the sources of information on agricultural insurance available to the respondents;
- iii. examine factors influencing the adoption of agricultural insurance as climate change mitigation strategy; and
- iv. identify and describe constraints to adoption of agricultural insurance as climate change mitigation strategy among the respondents in the study area.

MATERIALS AND METHODS

The Study Area

The study area is Borno State located at longitude 11°30'N, and latitude 13°0'E in North-Eastern Nigeria created on 3rd February 1976. The state covers a total area of 70,898 square kilometers and had projected population of 6,651,590 in 2023 at 2.4% annual population change (NPC, 2020). Borno State has twenty-seven (27) Local Government Areas. The State shares borders with Adamawa to the south, Yobe to the north, Republic of Niger to the North-East, Chad and Cameroon to the East. The state has two distinct seasons: wet and dry seasons. The wet season covers May to October with an average temperature between



12.8°C and 29.9°C while the dry season occurred between November and April with temperature range of 12°C and 41.1°C. Borno State is characterized with hot climate for most time of the year with a mean temperature of 37 °C. The average rainfall per annum ranged between 440mm - 806mm making the region falls within two distinct vegetation of Sudan and Sahel Savannah popularly called by the name Sudano-Sahel. Agriculture is the main stay of the state economy. The major crops cultivated include millet, sorghum, maize, wheat, rice, cowpea, groundnut and vegetables. They equally produce livestock such as cattle, sheep and goats. They practice irrigation farming producing important crops like watermelon, tomatoes, onions, carrots, cabbage and pepper Canback Global Income Distribution Database (Borno State Agricultural Development Program (BOSADP, 2022).

Sampling Technique and Sampling Size

Multistage sampling technique was used in selecting the respondents from the study area. First stage involved a convenience selection of two (2) Agricultural zones out of the three (3) zones in the state. These include Bama and Biu Zones. The two Zones were selected due to few incidences of insurgency activities and easy accessibility compared to the other Zones. In the second stage, simple random sampling technique was used in selecting six (6) local governments, three (3) from each of the selected Zones. These include Konduga, Jere, and Mafa from Bama Zone; Biu, Hawul and Bayo from Biu Zone of Borno as shown in Table 1. Snow Ball sampling procedure was employed in the selection of the respondents due to lack of sampling frame. Additionally, the local leaders were use for the identification of the referral subjects. A total of 270 respondents were selected from the selected Zones. This will be done by identifying the referral subject leading to another respondent.

Table 1: Sampling Size selection plan

Zones	LGAs	Sample wards	Sample size
Bama zone	Konduga	4	40
	Mafa	4	40
	Jere	4	40
Biu zone	Biu	6	60
	Hawul	5	50
	Bayo	4	40
Total	6	27	270

Source: Pre-Field Survey, (2023)

Method of Data Collection

Data were collected using structured questionnaire administered to the respondents selected from the study area.

Method of Data Analysis

Data collected were analysed using descriptive and inferential statistics. Descriptive statistics such as frequency distribution table, mean, and standard deviation were used to achieve objective i and iii.

Logit Regression

The logit regression was use to achieve objective ii which is the factors influencing the adoption of agricultural insurance as climate change mitigation strategy. Adoption of agricultural insurance fall into two categories: aware and unaware (awareness) or adopters and non-adopters (adoption). Since the dependent variables are binary in nature, the logistic regression model is appropriate for the analysis (Stoltzfus, 2017). Adoption of the agricultural insurance can therefore be influenced by a number of factors. The empirical specification of equation 2 above is presented as:



$$Y_i = \beta_0 + \beta_i X_i + \epsilon_i \quad \dots (1)$$

The explicit form of the function is specified as follows:

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \beta_5 X_5 + \beta_6 X_6 + \beta_n X_n + \epsilon_i \quad \dots (2)$$

Where:

The dependent variable (Y) is a dummy variable which take the value of adopted = 1, not adopted = 0.

A is a constant,

$b_1 - b_n$ are the regression estimates,

$X_1 - X_n$ denotes the set of explanatory variables or factors expected to influence awareness and adoption of agricultural insurance as a climate change adaptation measure

X_1 = Age of the respondents (years)

X_2 = Sex (1= male, 2, female)

X_3 = Marital status (married =1, single = 2, divorced = 3 and widowed = 4)

X_4 = Household size (number)

X_5 = Farm size (ha)

X_6 = Years of farming experience (years)

X_7 = Educational level (primary = 1, secondary = 2, tertiary = 3, adult education = 4, Qur'anic education =5, No education = 6)

X_8 = Primary occupation (Crop farming =1, Livestock =2, Civil servant =3, Artisan =4, Trading =5, Retirees =6, Agro-marketing = 7, Agro-forestry =8

X_9 = Land ownership (inheritance =1, purchase =2, rent =3, communal =4, lease =5, gift =6, government =7)

X_{10} = Extension contacts (1 yes, no =2)

X_{11} = Access to credit (1 yes, no =2)

X_{12} = Experience in Climate risk (Number of floods, dry lands and drought experiences)

X_{13} = Satisfaction of insurance (1 satisfied, not satisfied =2)

RESULTS AND DISCUSSION

Socio-economic Characteristics of the Respondents

The results in Table 2 revealed that majority (60.7%) of respondents were male, while 39.3% were female. This gender disparity reflects the socio-cultural dynamics of rural Nigeria, where men often dominate farming activities and have greater access to resources such as land and finance, making them more likely to adopt agricultural insurance. This is in line with findings by Wossen *et al.* (2017), who noted that gender disparities in access to resources significantly affect the adoption of climate risk management tools, including insurance.

The result further showed that majority (80.7%) of the respondents were married. While 12.2%, 4.1%, and 3.0% were widowed, single and divorced repetitively. This implies that married farmers are likely to play a pivotal role in driving the adoption of agricultural insurance as a climate change mitigation strategy due to their family obligations and the need to protect their livelihoods from climate-induced risks. This finding corresponds with the work of Etwire *et al.* (2017), which found that married farmers are more proactive in seeking protective measures like agricultural insurance to secure the welfare of their families

The result in Table 2 depicts that 37.8% of the respondents had secondary education. 10.0% and 8.5% of the respondents had primary and tertiary education respectively. Respondents with Qur'anic education constitutes 27.4% of the respondents while 7.8% of the respondents have never been to school. Education often provides individuals with basic skills



and knowledge that could facilitate understanding and adoption of new technologies, including agricultural insurance. This implies that educational level significantly influences the adoption of agricultural insurance. The finding is consistent with the report of Kassie *et al.* (2019), that educational attainment positively influences the adoption of agricultural innovations. Similarly, Sweeney *et al.* (2018) emphasize that education enhances the ability to understand and utilize new technologies, thus improving adoption rates.

The results in Table 2 revealed almost half (48.9%) of the respondents acquired land through inheritance, while 35.2% through purchased and 14.4% cultivates on community land. This implies that inheritance and purchase is the major system of land ownership. Farmers with purchased land may be more motivated to invest in insurance to protect their substantial financial investment. Also, majority (74.8%) of the respondents do not have access to credit, while 25.2% had access. Limited access to credit can restrict farmers' ability to invest in agricultural inputs, including insurance. Those without credit may struggle to afford insurance premiums, which could hinder their ability to manage agricultural risks effectively.

The result in Table 2 further revealed that majority (83.0%) of the respondents in the study area had access to extension services, while 17.0% do not. The result also showed that majority (68.9%) of the respondents were members of cooperative societies, while 31.1% are not. Cooperative association can serve as platforms for disseminating information about agricultural insurance. Members are more likely to be informed about insurance options and might have better access to resources that facilitate adoption. This implies that membership associations is likely to be associated with higher adoption rates of agricultural insurance. The finding is consistent with the findings of Manda *et al.* (2019), that cooperative membership facilitates the adoption of agricultural innovations. Similarly, Dercon and Christiaensen (2020) point out that organized groups can significantly impact the dissemination and adoption of new technologies by providing a structured environment for information sharing and support.



Table 2: Qualitative Variable of the Respondents

Variable	Frequency	Percentage
Sex		
Male	164	60.7
Female	106	39.3
Marital status		
Single	11	4.1
Married	218	80.7
Divorced	8	3.0
Widowed	33	12.2
Educational level		
Primary	27	10.0
Secondary education	102	37.8
Tertiary Education	23	8.5
Adult Education	23	8.5
Qur'anic Education	74	27.4
Never being to school	21	7.8
Land ownership		
Inheritance	132	48.9
Purchase	95	35.2
Communal	39	14.4
Leased	2	0.7
Gift	2	0.7
Access to credit		
Yes	68	25.2
No	202	74.8
Access to Extension services		
Yes	224	83.0
No	46	17.0
Membership of association		
Yes	84	31.1
No	186	68.9

Source: Field Survey, 2024

Quantitative Variable

The result in Table 3 revealed that 28.5% of the respondents were within the age range between 44-49 years, followed by 26.0% who were between 36-43 years with a mean age of 37 years. This age group is typically characterized by greater farming experience and a deeper understanding of agricultural risks, which could positively influence their adoption of agricultural insurance. The result also revealed that 23.0%, 12.2% and 10.4% of the respondents were within the age bracket of 30-35, 18-23 and 24-29 years, respectively. This implies that middle-aged farmers are likely to be the most responsive to agricultural insurance due to their farming experience, these findings align with the report by Wossen *et al.* (2017), which emphasizes that age significantly influences the willingness of farmers to adopt risk management tools, with younger farmers showing less immediate interest in insurance compared to their older counterparts. Similarly, Akotey *et al.* (2020) note that older farmers entrenched traditional practices may pose barriers to adoption, whereas younger farmers often require financial incentives to engage with such protective measures.

The result in Table 3 revealed that 46.7% had a household size of 1-5 persons, followed by 31.1% and 18.9% with 6-10 persons and 11-15 persons, respectively. Only 1.9%



and 1.5% of the respondents had 16-20 and 21-25 persons, respectively. The mean household size of the respondents was 7 persons. Smaller household sizes are often associated with less financial pressure and potentially fewer dependents to support, which might lead to lower prioritization of agricultural insurance. In contrast, larger households may face greater economic pressures and could see agricultural insurance as a necessary investment to safeguard their family's livelihood. This finding aligns with Dercon and Christiaensen (2020) that larger household sizes often correlate with higher adoption rates.

Similarly, majority (70.0%) of the respondents had 1-2 hectares, while 25.2% had farm sizes between 3-4 hectares, and only 4.8% had farms between 4-5 hectares. The mean farm size of the respondents was 2ha. This implies that most of the respondent were small scale farmers. Farmers with smaller farms might perceive agricultural insurance as less beneficial due to lower expected financial returns from insurance investments. However, smallholder farmers are often more vulnerable to climate risks, making insurance a crucial tool for risk management. Research by Manda *et al.* (2019) indicates that while smallholder farmers are more at risk, their adoption of insurance can be lower due to perceived high costs relative to the size of their farms.

The result further revealed that 47.8% of the respondents had 1-5 years of farming experience, 36.3% had 6-10 years, and 15.2% had 11-15 years. Only 0.8% had 16-21 years of experience with a mean of 7 years. More experienced farmers might have established farming practices and may be slower to adopt new innovations. This is consistent with findings from Tambo and Abdoulaye (2017), that while experienced farmers are generally more knowledgeable about risks, their openness to new practices varies based on the perceived benefits and risks associated with those practices. The result generally implies that larger households and farmers with relatively small farm sizes are likely to be more interested in agricultural insurance due to the greater financial vulnerability and economic pressure they face.

The results in Table 3 reveals that 38.5% had income between ₦150,000-250,000, followed by 20.4% with ₦40,000-140,000. Respondents with income range between ₦260,000-360,000, ₦370,000-470,000 and above ₦470,000 constitutes 18.9%, 14.4% and 7.8% of the respondents. The mean income was ₦261,300, which indicates that most of the respondents were within a low to moderate income. The predominance of low to moderate income among the respondents suggests that affordability is a significant barrier to the adoption of agricultural insurance. Farmers with lower incomes may struggle to pay premiums. Similar results were reported by Stephen (2019) in research titled levels of awareness and use of agricultural insurance scheme in Kogi State of Nigeria that majority (55.0%) of the farmers belong to low-income group earning less than ₦100,000.00 per annum.



Table 3: Quantitative Variable of the Respondents

Variable	Frequency	Percentage	Mean
Age (years)			
18-23	33	12.2	37 years
24-29	28	10.4	
30-35	62	23.0	
36-43	70	26.0	
44-49	77	28.5	
Household size (number)			
1-5	126	46.7	7 persons
6-10	84	31.1	
11-15	51	18.9	
16-20	5	1.9	
21-25	4	1.5	
Farm size (ha)			
1-2	189	70.0	2 ha
3-4	68	25.2	
4-5	13	4.8	
Farming experience (years)			
1-5	129	47.8	7 years
6-10	98	36.3	
11-15	41	15.2	
16-21	2	0.8	
Average income (₦)			
40,000-140,000	55	20.4	₦261,300
150,000-250,000	104	38.5	
260,000-360,000	51	18.9	
370,000-470,000	39	14.4	
Above 470,000	21	7.8	

Source: Field Survey, 2024

Sources of Information on Agricultural Insurance of the Respondents

Table 5 depicts that, farmers in the study area received information about agricultural insurance from multiple sources. The most frequently sources were cooperatives (50.0%) and fellow farmers (48.5%), followed by the internet (47.8%) and workshops/seminars (46.7%). Social media is another source constituting 44.8% of the respondents. Television also serve as a source of information on agricultural insurance for 40.7%, while extension agents and radio were sources of information to 37.0% and 32.2% of the respondents respectively in the study area. The wide range of sources through which farmers receive information on agricultural insurance underscores the importance of diverse communication channels in raising awareness. This finding is supported by Akudugu *et al.* (2018), that diverse and modern information channels, including digital media and cooperative engagements, significantly boost awareness and adoption of agricultural innovations. Additionally, the role of social media and the internet is becoming increasingly important in disseminating agricultural information, a trend as reported by Aker (2020), who emphasized the impact of digital tools on information dissemination in rural areas.

The results further showed that 20.0% of the respondents adopted theft insurance followed by insurance against diseases (17.0%). Other types adopted include insurance for pest outbreaks (15.9%), fire outbreaks (15.6%), flood outbreaks (15.2%), and drought (13.7%). This distribution suggests that farmers prioritize protection against specific risks



that are more tangible and immediate, such as theft and diseases. The predominance of theft and disease insurance suggests that farmers are more likely to adopt insurance types that protect against frequent, localized risks rather than climate risks that are perceived as less predictable or less immediate. This pattern is consistent with findings from Njeru *et al.* (2019) that farmers tend to prioritize insurance types that address risks they experience regularly over broader climate risks.

Table 4: Distribution of Respondents According to Sources of Information

Sources of Information	Frequency	Percentage*
Extension agent	100	37.0
Radio	87	32.2
Television	110	40.7
Internet	129	47.8
Fellow farmers	131	48.5
Cooperatives	135	50.0
Social media	121	44.8
Workshops/seminars	126	46.7
Types of agricultural insurance adopted		
Drought	37	13.7
Flood outbreak	41	15.2
Fire outbreak	42	15.6
Diseases	46	17.0
Pest	43	15.9
Theft	54	20.0

Source: Field Survey, 2024

* Multiple response

Factors Influencing the Adoption of Agricultural Insurance

The results in Table 6 revealed the factors that influence the adoption of agricultural insurance among the respondents in the study area. The coefficient of age was positive and significant ($P < 0.01$), indicating that older farmers are more likely to adopt agricultural insurance. This may be because older farmers, with more experience in farming and exposure to climate risks, perceive insurance as a valuable tool to mitigate the adverse effects of climate change on their livelihoods. Older farmers might also have greater access to resources, making it easier for them to afford insurance premiums. This finding is consistent with Adebayo *et al.* (2020), who observed that age positively influences the adoption of agricultural technologies.

Educational level also shows a positive and significant effect ($P < 0.05$) on the adoption of agricultural insurance. Farmers with higher levels of education are more likely to understand the benefits of agricultural insurance and are better equipped to navigate the administrative processes involved in enrolling for insurance. Education fosters better awareness and understanding of agricultural risks, leading to more informed decisions regarding risk management strategies. This result aligns with the findings of Yusuf *et al.* (2019), who reported that education plays a critical role in farmers' decision-making regarding agricultural technology adoption.

Access to extension services also positively influenced the adoption of agricultural insurance at 1% ($P < 0.01$). Extension agents play a crucial role in disseminating information about the availability and benefits of agricultural insurance, which helps build trust and confidence among farmers. Farmers who have regular access to extension services are more likely to adopt agricultural insurance. Regular contact with extension services provides



farmers with updated knowledge on agricultural practices, including risk mitigation strategies such as insurance. This finding supports the results of Adesina *et al.* (2018), who identified access to extension services as a key determinant in the adoption of agricultural technologies.

Other variables such as sex, marital status, household size, farm size, farming experience, land ownership status, and access to credit were not found to have a statistically significant influence on the adoption of agricultural insurance in the study area. This indicates that these factors may not play a central role in influencing whether or not a farmer decides to adopt insurance as a climate change mitigation strategy.

Table 5: Factors Influencing the Adoption of Agricultural Insurance

Variable	Coefficient	Std. error	T -value	Sig.
Age	.072	.023	9.609	.002***
Sex	-.088	.403	.047	.828
Marital status	.252	.220	1.316	.251
Household size	.014	.039	.125	.724
Farm size	-.209	.173	1.455	.228
Farming experience	-.054	.050	1.143	.285
Educational level	.157	.092	2.928	.087*
Primary occupation	-.263	.225	1.360	.243
Land ownership status	-.050	.182	.075	.784
Access to extension services	1.287	.447	8.280	.004***
Access to credit	-.016	.339	.002	.962
Experience in Climate risk	.046	.195	.056	.812
Satisfaction of insurance	-.403	.294	1.883	.170
Constant	-3.712	1.577	5.540	.019
-2 Log likelihood	313.666^a			
Chi-square	42.276***			
Pseudo R squared	.198			

***significant at 1% and *significant at 5%

Source: Field Survey, 2024

Constraints to Adoption of Agricultural Insurance

The results in Table 7 the distribution of respondents according to constraints to adoption of agricultural insurance in the study area. The major (71.1%, 70.0%, and 69.3%) constraints to adoption of agricultural insurance were high premium costs, inadequate awareness and inadequate insurance packages. High premiums may deter farmers from enrolling in insurance schemes, even if they recognize the potential benefits. This finding is consistent with studies by Bello *et al.* (2020) and Olaniyi *et al.* (2019), which found that high costs are a major obstacle to the adoption of agricultural technologies. Limited awareness hampers the ability of farmers to make informed decisions about risk management strategies. This finding aligns with the report of Adebayo *et al.* (2021), who emphasized the need for enhanced awareness campaigns to increase insurance uptake among farmers. Inadequate of diverse insurance products tailored to the specific needs of farmers can limit the options available to the respondents in the study area. This supports the observations of Bello *et al.* (2018), who reported that the lack of appropriate insurance products is a barrier to widespread adoption.

Similarly, distrust of insurance providers and long processing times were also perceived as constraints by 64.4% and 63.0% of the respondents in the study area. Distrust can arise from negative past experiences or poor service delivery, while long processing



times can delay the receipt of claims, reducing the perceived reliability of insurance. The results further revealed that inadequate government support (62.6%) and poor claims settlement processes (60.0%) further distract the adoption of agricultural insurance in the study area. Effective government involvement and better claims handling are essential for making insurance more accessible and reliable for farmers. Other constraints to the adoption of agricultural insurance in the study as indicated by the respondents were unavailability of suitable insurance products, poor past experiences with insurance, administrative bottlenecks and cultural/religious beliefs constituting 58.1%, 54.4%, 51.1%, and 48.1% of the respondents respectively.

Table 6: Distribution of Respondents According to Constraints to Adoption of Agricultural Insurance

Constraints	Frequency	Percentage*	Ranking
High premium costs	192	71.1	1 st
Inadequate awareness	189	70.0	2 nd
Limited availability of insurance package	187	69.3	3 rd
Distrust of insurance providers	174	64.4	4 th
Long processing times	170	63.0	5 th
Inadequate government support	169	62.6	6 th
Poor claims settlements process	162	60.0	7 th
Unavailability of suitable insurance products	157	58.1	8 th
Poor past experiences with insurance	147	54.4	9 th
Administrative bottleneck of insurance process	138	51.1	10 th
Cultural or religious beliefs	130	48.1	11 th

Source: Field Survey, 2024

* Multiple response

CONCLUSION AND RECOMMENDATIONS

The study concludes that age, educational level and access to extension services significantly influenced the adoption of agricultural insurance in the study area. Also, high costs, inadequate awareness, and limited product availability were the major constraints to the adoption of agricultural insurance. Based on the finding of the study, the following recommendations were made,

- The cost of agricultural insurance premiums should be reduced through government subsidies, partnerships with insurers, or low-cost products tailored to smallholder farmers.
- Extension workers should raise awareness about agricultural insurance via education campaigns, cooperatives, local media, and training programs to help farmers understand its value.
- Agricultural insurance providers should offer a broader range of products that address specific local risks like droughts and pests, ensuring accessibility and relevance.
- The insurance claims process should be streamlined to reduce delays by simplifying procedures, using technology, and providing clear filing guidelines.
- Government involvement should include financial incentives, public-private partnerships, and supportive policies to enhance agricultural insurance coverage.
- Simplified information and educational programs should target farmers with lower educational levels to improve their understanding and adoption of agricultural insurance.

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