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Crop Insurance in Nepal: Farmers' Perception on Paddy Crop Insurance and Institutional Performance in Chitwan and Bardiya Districts

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Abstract

Background: The Government of Nepal has implemented subsidized agriculture and livestock insurance for more than one decade. However, the penetration rate of crop insurance in farming communities seems to be very slow. Therefore, this study explored farmers' perceptions of the paddy crop insurance scheme and institutional effectiveness in implementing the paddy crop insurance scheme.

Objectives: The objectives of this study were to examine farmers' attitudes toward paddy crop insurance and to assess perceptions of the effectiveness of institutional roles.

Methods: The research adopted a mixed method using both qualitative and quantitative data. Total 460 respondents were selected, having equal numbers of insured and non-insured. Primary data was gathered using a semi-structured interview schedule. Descriptive and exploratory techniques were used for the analysis of data. Chi-square tests, and composite indexing models were applied using SPSS and Stata.

Findings: The results show that farmers appreciated the government's initiative, they were dissatisfied with claim procedures, compensation, and institutional support. Key barriers included complex documentation, claim settlement, low awareness, and poor coordination among implementing agencies.

Conclusion: The study concludes that weak institutional performance and low trust in insurance companies limit the effectiveness and uptake of paddy crop insurance. Strengthening institutional roles, simplifying procedures is critical to enhance adoption and ensure better risk management.

Novelty: This study adds to the body of knowledge on agricultural insurance in Nepal by comparing the districts of Chitwan and Bardiya and investigating how farmers view institutional performance and paddy crop insurance. The results provide evidence at the district level regarding the ways in which institutional service delivery and farmer risk perception impact crop insurance program participation.

Keywords: Agricultural risk management, Crop insurance, delivering and promoting, institutional effectiveness, perceptions

1. Introduction

1.1 Background on crop insurance in Nepal

Agriculture is a crucial sector of Nepalese economy, contributing about 23.95% to the national Gross Domestic Product (GDP) in fiscal year 2021/22 and providing livelihoods for approximately 62% of households and 67% of the population (CBS, 2023). Furthermore, the Central Bureau of Statistics identified paddy as major cereal crop in Nepal in the National Sample Census of Agriculture 2021/22. Paddy plays an important role in rural livelihoods and national food security and alone contributed about 6.76% to the total GDP. Agriculture sector seems to be vulnerable to abiotic and biotic factors each year, resulting in losses of production. It is estimated that worth loss 8.26 (Billion NPR) of paddy crop by floods and rains cultivated in 85580 hectares of land in Nepal in 2021 (MoALD, 2022). Moreover, paddy growing farmers have experienced such types of losses each year to present day. Therefore, the Government of

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Nepal implemented a subsidized agricultural and livestock insurance program in 2013 to reduce farmers' exposure to biotic, abiotic, and production risks and uncertainties. The agriculture and livestock insurance are based on a public private partnership model involving 14 non-life insurance companies. Furthermore, with the government introducing agriculture and livestock insurance, paddy insurance is also a provision, but it accounts for less than 1% of total insured agriculture and livestock policies (DoA, 2021). In addition, only 4% of farming households have access to agriculture and livestock insurance in Nepal (CBS, 2023). Thus, due to slow expansion of paddy insurance, it is necessary to address knowledge gap and practical issues hindering uptake of insurance policy.

Adoption theory, Institutional theory, and Risk perception theory all help explain why farmers take up agricultural insurance. Everett Rogers really comprehensive work in his Diffusion of Innovations in to adoption theory. He looks at how new ideas or technologies spread, why people pick them up, and how fast that happens. Rogers (2003) points out that people adopt new innovations when they perceived its relative advantages, compatibility, complexity, trialability, and observability. They're much more likely to accept if the insurance is genuinely useful, easy to understand, and works well with the way they already farm. Paul J. DiMaggio and Walter W. Powell (1983) came up with Institutional theory, pointing out that administrative structures, rules, and how much people trust institutions shape how well new ideas catch on. So, things like actually following through on policies, being open about how claims get settled, and building trust in insurance companies all play a big role in whether people get involved. Slovic's Risk Perception theory (2010) suggests that people's past experiences and perceptions of risk influence their decisions. This theory is a good way to understand how farmers view paddy crop insurance and how important trustworthy institutions are to them.

Paddy has been growing less or more in all geographical areas, but plain areas (Terai regions) of Nepal share more than 70% in terms of areas and production (MoALD, 2024). Chitwan and Bardiya are paddy-growing districts representing the mid and west plain regions of Nepal. Chitwan district of Bagmati province's major crop is paddy cultivated in 3621825 hectares of land having 205859 metric tons production and 4.20 metric tons productivity per hectare (ADO, 2024). Similarly, paddy is also a major crop of Bardiya district of Lumbini province, cultivated in 48971 hectares of land, having 1677632 metric tons of production and 5.07 metric tons of productivity per hectare (MoALD, 2024). The statistics of the Department of Agriculture for FY 2021/22 show that Chitwan and Bardiya districts had ranking first and second in the largest number of paddy-insured farmers respectively (DoA, 2022). The objectives of the study are to examine farmers' attitudes toward paddy crop insurance and to assess their perceptions of the effectiveness of institutional roles. Furthermore, the research questions are: How is the adoption of paddy crop insurance influenced by the decision of risk perceptions of farmers in the Chitwan and Bardiya districts of Nepal? And, what institutional performances, such as awareness, service delivery, timely claim settlement, and finding out the barriers and gaps to make effective uptake of paddy crop insurance?

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In addition, this study focuses on two districts and may not reflect the situation in other parts of Nepal. Due to the time and monetary constraints, limited numbers of farmers are interviewed and findings may not be generalized.

2. Literature Review

The statement of Bhattacharya and Biswas (2024) show that the global market of agriculture insurance reached USD 39.81 billion in 2022 and is expected to raise to USD 61.51 billion by 2030. Thus, agricultural insurance has been the promising business of the insurance sector as well as a protection tool for farmers globally. While concerning institutional involvement in crop insurance, Rachman et al. (2021) considered that public private partnership is the best approach to make an efficient and sustainable crop insurance system. Furthermore, El Azab et al. (2025) explained that different institutions like credit providers, insurance companies, and social safety nets could be affecting the coping of the agricultural vulnerability through their ability. Overall, various public and private institutions have pivotal roles and responsibilities to accelerate the sustainability of crop insurance globally.

Paddy crop is cultivated between 100 and 3050 meters above mean sea level in Nepal, including Chhumchaur of Jumla district the highest paddy-growing elevation in the world (Vista et al., 2024). Notably, there are biotic and abiotic factors which negatively affect paddy crop's life cycle, resulting in the failure of crop or decline in production (Adhikari & Sharma, 2021). Therefore, paddy insurance scheme is definitely important to protect the paddy crop and maintain the livelihood of farmers' well-being. Furthermore, Kemausuor et al. (2021) identified that agricultural insurance has evolved as an important risk management mechanism, which creates financial support for the insured. Hence, many countries' governments provide subsidies on agricultural insurance to mitigate the losses of the production of agriculture and livestock sectors and help farmers and rural communities (Blackmore, 2025).

The government of Nepal has been formally implementing a public private partnership model of agriculture and livestock insurance since 2013 with a premium subsidy (up to 80%) to protect the losses of crops and livestock from various risks (MoALD, 2024). Furthermore, Bajracharya and Adhikari (2024) determined the roles and responsibilities of insurance companies in the Nepalese context as handful insurers actively provide livestock insurance compared to crop; crop insurance is low due to complex procedural rules and higher risk**.** Besides, the provincial and local level agricultural offices help farmers in the product registration process, verify insured commodities as well as assist in the claim process (Bhandari et al., 2021).

The working age of the Nepalese population (15 to 59 years) is 61.96 percent (CBS,2021). Furthermore, Ghimire et al. (2023) found that the age of farmers does not significantly influence the adopting of agricultural insurance in Nepal. On other hand, Awasthi and Godara (2025) concluded from their research that age of farmers was significantly influence the uptake of insurance. In addition, Shell Foundation (2025) reported on the basis of studies in South Asia and Africa showing a gender gap as female farmers are less participatory in agricultural insurance compared to male farmers because of lack of access to information, financial literacy, and trust in institutions. Also, the success of the insurance program depends on the trust

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between the insured and the insurer (Ghimire et al., 2023). Furthermore, Chapagain and Ghimire (2023) found that among the different factors, education level, land holding size, and claim settlement process significantly affect the satisfaction of the insured. In addition, Barlis (2022) concluded that appropriate insurance products and an awareness program enhance adopting agricultural insurance among smallholder farmers. Also, Bon et al. (2025) identified that socioeconomic factors like income level, education, and access to information significantly affect the adoption of insurance schemes among farmers.

Furthermore, Pertiwi et al. (2024) identified that education, income, landholding size, and farming experience are significantly affected in the adoption of paddy crop schemes in Indonesia. In addition, Bishwakarma (2023) concluded the perceptions of sugarcane farmers of Sunsari district of Nepal as dissatisfied with the claim process and amounts of claims. Likewise, Mayookha and Sunandha (2025) revealed that delayed claim disbursement is the most significant constraint followed by affordability and limited knowledge in insurance. Likewise, documentation problems and procedural complexity also affect the uptake of agricultural insurance. As well as, Bhandari et al. (2021) concluded that farmers frequently feel crop insurance is bureaucratic and time consuming due to duplication and standardization in required documents.

Furthermore, Malini and Ibrahim (2021) suggested ensuring the prompt claim settlement necessity for the improvement of agricultural insurance. Also, Biswal and Bahinipati (2022) found that lack of confidence in loss assessment, delayed claim processing, and insufficient claim payments are leading to dissatisfaction among the farmers. Likewise, Owusu et al. (2021) determined that factors influencing the uptake of agricultural insurance among small farmers in Ghana are low awareness and understanding, affordability, trust, and institutional challenges. In addition, Chen (2025) argued that trust in institutions significantly influences the uptake of agricultural insurance. Besides, Shrestha (2024) argued that the government subsidy on agricultural insurance is to encourage farmers' involvement in the insurance program, but implementation aspects are causing hindrances in participation in the Nepalese context. In addition, Awasthi and Godara (2025) found that the interconnectedness of awareness, accessibility, trust, and perceived effectiveness accelerates the uptake of crop insurance schemes. Moreover, Stutley (2025) revealed in his study related to agricultural insurance of the Asia and Pacific region that low awareness, weak infrastructure, and limited financial literacy are the key constraints to adoption. In addition, Timilsina et al. (2022) determined in their studies that mobilizing farmers' groups and cooperatives, promotion of awareness programs significantly influence the uptake of insurance schemes.

There are some the latest & relevant research studies performed in crop insurance in Nepalese context which empirically tested relationships between socio - demographic factors, institutional performance, and insurance perceptions of farmers. Pant et al. (2026) reached their conclusion that annual household income exists as the primary factor which determines banana crop insurance adoption because higher income farmers show greater likelihood to purchase insurance. The researchers recommended that increasing farmer income and establishing stronger agricultural cooperatives and farmer groups and providing greater insurance subsidies

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and investigating agricultural product export markets will result in higher insurance adoption rates.

Furthermore, Ghimire et al. (2025) found that various limitations such as insufficient farmers' knowledge of insurance, bad attitudes towards insurance, late claim settlement, poor coordination among institutions, lack of money, and little support negatively impact the use of crop insurance. The authors suggest that the implementation of awareness campaigns, quick and transparent claim processing, linking insurance with credit and subsidy programs, and institutional reforms would be necessary steps for raising the level of adoption and effectiveness of crop insurance.

Besides, Ghimire et al. (2023) discovered that economic and claim-related experiences significantly shaped farmers' views on adopting insurance products. Farmers showed moderate to high awareness of agricultural insurance and maintained a positive attitude toward it, seeing it as a tool for managing risks. In contrast, socio-demographic factors such as age, gender, education, and family size did not prove to be statistically significant influences. However, trust in the insurer played an important role in increasing the acceptance of agricultural insurance. Also, Biswakarma and Rana (2021) revealed that the farmers' participation in crop insurance schemes in Nepal is significantly affected by their awareness level, experience with the anticipated reprisal, claim agreement, and individual threat perceptions. In contrast, premium level, production threat, and ease of access to the services of insurance were not significant factors in shaping the intention. They suggested that the awareness building and effective insurance processes are essential to motivate participants to be involved in crop insurance schemes.

3. Materials and Methods

3.1 Study Area: The study was conducted in two districts of Nepal, namely Chitwan and Bardiya. Administratively, Chitwan district is under the Bagmati province and Bharatpur is the headquarters of Chitwan district. The livelihood of people of this district is mainly based on agriculture, livestock, industry and tourism. Khaireni municipality, Madi municipality and Bharatpur metropolitan city were purposively selected based on existence of maximum numbers of paddy crop insured for this study. Likewise, another selected Bardiya district is under Lumbini province and Gulariya is the headquarters of the district. Agriculture is the backbone of the local economy, along with livestock raising; remittance and off-farm income are also sources of income. Bansgadhi municipality is purposively selected as a study area based on the maximum number of paddy crop insured presence in this district.

3.2 Research Design: This research is mainly based on descriptive, and exploratory types. The collected data were analyzed using qualitative, quantitative, and mixed-method approaches.

3.3 Sampling Method: The overall known population for this research was made up of farmers aged ≥18 years who were involved in paddy cultivation, and either insured or non-insured for their paddy crop in fiscal year 2021/2022. Insured and non-insured were two categories considered during sample size determination. The sample size (n) for this study was determined using Cochran's (1977) formula:

Sample Size Determination

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$$n = Z^2 \times p \times q / e^2$$

Where:

n = required sample size
Z = Z- score corresponding to the desired confidence level
p = estimated proportion of the population with the characteristic of interest
$q = 1 - p$ = complement of p
e = margin of error (expressed as a proportion)

This formula was applied to calculate the sample size at a 95% confidence level.

3.4 Sample Size: The total number of samples of both districts randomly selected was 460 (where 230 were insured and an equal number of non-insured). The sample size of Chitwan and Bardiya districts was 250 and 210, respectively. Where 125 and 105 insured and an equal number of non-insured were selected from Chitwan and Bardiya districts respectively. While taking a sample, the total of 11 wards (6 and 5 wards from Bardiya and Chitwan respectively) of both districts, 4 local bodies (3 and 1 local bodies of Chitwan and Bardiya districts respectively), were determined for taking a sample based on insured households. The wards having less than 10 insured households were excluded from the study and the sample size of remaining wards was determined by Proportionately.

3.5 Techniques of data collection: This study employed both primary and secondary data. Primary data were collected using a pre-tested survey with fifteen farmers in each district and a corrected semi-structured interview schedule for the household survey, which included both open-ended and closed-ended questions, tailored according to the type of information required. Along with this, key informant's interview and focus group discussion were also done to validate primary data. Secondary data were collected from different sources, primarily publications from the Ministry of Agriculture and Livestock Development and the Central Bureau of Statistics, as well as relevant books and reports from other institutions related to the research topic.

3.6 Data Analysis:

All collected data was analyzed using qualitative, quantitative and mixed method approaches. The data were initially processed and tabulated using MS Excel, followed by statistical analysis SPSS and Stata. Descriptive statistics, including frequency counts and percentages were used to summarized the data. For perception and other qualitative data, composite index values and scaling procedures were applied. The chi-square test/t-test were used to determine the relationship between the variables.

3.7 Ethical Considerations:

Unpaid involvement of respondents in this study, and they were informed about the aims of the research prior to data collection. The ethical approval was not obtained from an institutional review board. But verbal informed consent was taken from all participants, along with confidentiality and anonymity, which were also ensured to eliminate individual identifiers from the dataset and collect facts only for academic purposes. Study being a non-invasive survey of

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adult participants, formal ethical approval was not required but standard ethical values of social science research were followed.

4. Results and Discussion

4.1 Socio-Demographic Profile of Respondents:

Table 1 presents respondents' demographic profile. Out of 460 respondents. Majority were male respondents (64.59%) in both districts, while females constituted 35.41%. The female respondents of Bardiya district were slightly higher (37.62%) compared to Chitwan district (33.2%). The difference was not statistically significant among the locations. This finding aligns with the previous study by Shell Foundation (2025). The age of respondents in both districts ranged from 20 to 86 years, with an overall mean of 49.39 years indicating that most respondents were middle-aged. This finding is consistent with findings of CBS (2021). This study shows that age does not affect the adoption of insurance contrary to the results of Awasthi and Godara (2025). Majority of janjati (49.34%) were in both districts. In Chitwan, most respondents were Brahmins (37.6%), followed by Chhetris (24.4%), whereas Bardiya had a substantial majority of Janajati respondents (73.33%).

Table 1: Socio-Demographic Profile of Respondents

Variable	Category / Statistic	Chitwan (n=250)	Bardiya (n=210)
Gender	Male / Female (%)	167 (66.80) / 83 (33.20)	131 (62.38) / 79 (37.62)
Age (years)	Min–Max / Mean ± SD	24 – 86 / 51. 60 ± 12.00	20 –73 / 47.18 ± 11.53
Ethnicity (%)	Bhramin / Chhetri / Janajati / Dalit / Madheshi	94 / 61 / 73 / 14 / 8	5 / 35 / 154 / 7 / 9
	χ^2	115.74*	
Education (%)	Illiterate / Read & Write / SLC / Intermediate / Bachelor	34 / 110 / 66 / 28 / 10	83 / 66 / 43 / 15 / 3
	χ^2	42.92*	
Occupation (%)	Farming / Government job / Daily Wage / Private job / Foreign employment / Business / Others	221 / 6 / 2 / 8 / 4 / 7 / 2	178 / 10 / 9 / 5 / 4 / 2 / 2
	χ^2	10.15	
Farming Experience (years)	Min–Max / Mean ± SD	1– 60 / 22.93 ± 13.22	2– 55 / 24.90 ± 12.47

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Irrigated Land (ha)	Min–Max / Mean ± SD	0.03 – 4.06 / 0.54 ± 0.45	0.03 –3.05 / 0.57 ± 0.62
Non-Irrigated Land (ha)	Min–Max / Mean ± SD	0.03–0.78 / 0.14 ± 0.14	0.01–2.37 / 0.40 ± 0.38

Source: Field Survey, 2023

Note: figures in parentheses indicate percentage, significance levels: $p < 0.10$ (*)

A significantly higher proportion of illiterate farmers were found in Bardiya (39.52%) compared to Chitwan (13.6%), indicating a strong disparity in basic educational attainment among farmers. Farmers who could only read and write accounted for 44% in Chitwan and 31.43% in Bardiya. Overall, the educational status of respondents of Chitwan district showed better than that of respondents from Bardiya district. Farming was the primary occupation in both districts (88.4% in Chitwan; 84.76% in Bardiya). Paddy farmers in the study areas had a wide range of farming experience, with some having as little as 1 year of experience and others up to 60 years. In Chitwan, the experience ranged from 1 to 60 years, with a mean of 22.93 years, while in Bardiya, it ranged from 2 to 55 years, with a mean of 24.90 years. This pattern is consisted with findings of previous research conducted by Pertiwi et al. (2024). Farmers in Chitwan and Bardiya districts show distinct landholding patterns across different land types. Both districts have the same minimum irrigated own cultivated land of 0.033 ha; The maximum area of Chitwan is 4.06 ha larger than Bardiya's 3.05 ha. with mean holdings of 0.54 ha in Chitwan and 0.57 ha in Bardiya. For non-irrigated own cultivated land, Bardiya exhibits a wider range (0.016 to 2.37 ha) and a higher average (0.40 ha) than Chitwan, which ranges from 0.033 to 0.78 ha with a mean of 0.14 ha.

4.2 Attitude of the respondents towards the crop insurance

Table 2: **Attitude of the respondents towards the crop insurance**

S. N	Statement	Agree	Neutral	Disagree	Index Value	Rank
1.	The Crop Insurance Scheme is a good initiative by the Government to help the farming community	216	230	14	0.44	I
2.	I face no difficulties during the registration process of the Paddy Insurance Scheme	119	304	37	0.18	II
3.	The premium rate prescribed in the Paddy Insurance Scheme is reasonable.	67	357	36	0.07	III
4.	I spend money as planned in an insurance policy	82	309	69	0.03	IV
5.	I get a claim from the insurance company when the insured paddy is damaged.	23	316	121	-0.21	VI
6.	I get the claim amount on time.	5	305	150	-0.31	VIII

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7.	The compensation amount for Paddy Insurance Scheme is satisfactory.	9	319	132	-0.27	VII
8.	Requirement of land entitlement certificate.	59	334	67	-0.02	V
	Mean				-0.013	

Source: Field survey,2023

The table 2 represents the respondents' attitude on crop insurance. To assess the attitude of respondents towards the crop insurance scheme a three-point Likert scale was applied (Agree, Neutral, Disagree). Among all the statements, respondents showed the most positive attitude toward the statement that the Crop Insurance Scheme is a good initiative by the Government to help the farming community with an index value of 0.44, ranked first. The results of this study show that similar trends were observed by Kemausuor et al. (2021). The attitude remained relatively positive regarding the statement that farmers face no difficulties during the registration process of the paddy insurance scheme with index value 0.18 ranked second, suggesting by many farmers that the registration process is not a major obstacle. This finding is inconsistent with the path of the results of Bajracharya and Adhikari (2024). However, attitudes became notably less favorable on matters concerning cost, compensation, and claims. Negative attitudes were more pronounced regarding claims and compensation. The statements which state I get a claim from the insurance company when the insured paddy is damaged are ranked VI with an index value of 0.21, and the statement of compensation amount is satisfactory (- 0.27, ranked VII), and I get the claim amount on time (-0.31, ranked VIII) all scored negatively. This demonstrates discontent and frustration among respondents, indicating a perceived lack of reliability and fairness in the claim settlement process. The results show the similar trend of the study carried out by Bishwakarma (2023). The overall findings show a mixed but slightly negative average attitude among respondents toward the crop insurance program, with a mean index value of - 0.013.

4.3 Perception of respondents on the performance and role of Nepal Insurance Authority (NIA)

Table 3: Perception of respondents on the performance and role of Nepal Insurance Authority (NIA)

S. N	Performance and Roles	Agree	Neutral	Disagree	Index value	Rank
1.	Awareness programs on crop insurance	73	288	99	-0.06	II
2.	On time Complaints registered regarding insurance companies	53	311	96	-0.09	V
3.	Amendments on insurance policies	46	341	73	-0.06	II
4.	Approval of new insurance policies according to demand of farmers.	36	339	85	-0.11	VI
5.	Fixation of appropriate premium rate	45	355	60	-0.03	I

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6.	Amendments on perils	44	343	73	-0.06	II
7.	Facilitation to farmers on proper documentation during claim	48	301	111	-0.14	VII
8.	Appropriate and quick decisions on the disputes between farmers and insurers	32	299	129	-0.21	VIII
					-0.09	

Source: Field survey,2023

The table 3 presents the perception of respondents regarding various roles and responsibilities undertaken by the Nepal Insurance Authority (NIA), particularly in the context of agricultural insurance services. The respondents were asked to express their level of agreement with different performance indicators, and their responses were categorized into three options: Agree, Neutral, and Disagree. An index value was calculated for each parameter to reflect the overall perception, and ranks were assigned accordingly. Among the listed functions, Fixation of appropriate premium rate received the highest positive evaluation with an index value of -0.03, securing the first rank. This indicates that respondents relatively appreciated NIA's role in determining suitable premium rates for agricultural insurance schemes. On the other hand, appropriate and quick decisions on disputes between farmers and insurers were ranked the lowest (VIII) with the most negative index value of - 0.21. This suggests a strong perception among the respondents that the authority has not been effective in ensuring timely and fair resolution of insurance-related disputes. Three items, such as awareness programs on crop insurance, amendments on insurance policies, and amendments on perils, all received the same index value of - 0.06 and were ranked jointly in the second position. This shows a moderate level of dissatisfaction or neutrality in these areas.

Based on the perception analysis of respondents regarding the performance and role of the Nepal Insurance Authority (NIA), the findings reflect a generally negative attitude, with a mean index value of – 0.09. The respondents expressed the most positive sentiment toward the fixation of appropriate premium rates (– 0.03), indicating some appreciation for NIA's efforts in determining fair insurance pricing. However, roles such as raising awareness about crop insurance, making timely policy amendments, and updating perils all received a moderately negative index value of – 0.06, suggesting dissatisfaction with the effectiveness and reach of these initiatives. This is partially consistent with the findings of Bhandari et al. (2021). Similarly, the registration and resolution of complaints and disputes received even lower index values (– 0.09 and – 0.21, respectively), reflecting a strong perception that NIA is not effective in addressing farmers' grievances or facilitating timely conflict resolution. Additionally, the support provided by NIA in helping farmers with documentation during claims also received a low index (– 0.14), which aligns with the study by Chapagain et al. (2023).

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4.4 Perception of respondents on the performance of insurance companies

Table 4: Perception of respondents on the performance of insurance companies

S. N	Performance of insurance companies	Agree	Neutral	Disagree	Index value	Rank
1.	On-time sales of the insurance policy	80	341	39	0.09	II
2.	Proper information regarding the insurance policy	37	339	84	-0.10	IV
3.	Only relevant documents are asked	153	280	27	0.27	I
4.	Provide proof of insurance premium	69	319	72	-0.01	III
5.	Proper monitoring and evaluation	46	297	117	-0.15	V
6.	Proper information regarding the renewal of the insurance policy	35	315	110	-0.16	VI
7.	Quick response from the insurance regarding the loss	29	275	156	-0.28	VIII
8.	Effective response and proper documentation in the claim process	31	298	131	-0.22	VII
9.	Proper facilitation after information about the loss	26	379	155	-0.28	VIII
10.	On-time evaluation of the loss by technical experts or a loss assessor	33	266	161	-0.28	VIII
11.	On-time payment of the claim	28	267	165	-0.30	XI
	Mean				-0.13	

Source: Field survey,2023

Table 4 illustrates the respondents' perception regarding the performance of insurance companies in relation to agricultural insurance services. Responses were collected across eleven performance indicators, where respondents were asked to rate their agreement. Based on the distribution of responses (Agree, Neutral, Disagree), an index value was calculated for each indicator to assess the overall sentiment, and a rank was assigned accordingly. Among all the aspects, the indicator "Only relevant documents are asked" received the highest positive perception, with an index value of 0.27, earning it the first rank. This indicates that most respondents believe insurance companies generally require only necessary documents, which reduces complexity for farmers. The present study's findings differ significantly from the results of Bhandari et al. (2021). They concluded that farmers frequently feel crop insurance is bureaucratic and time consuming due to duplication and standardization in required documents. "On-time sales of the insurance policy" was also perceived positively, ranking second with an index value of 0.09, suggesting that policy availability is relatively timely and accessible to clients during sales periods. Conversely, the lowest-ranked performance indicator was "On-time payment of the claim", with an index value of -0.30 and a rank of eleventh. This clearly reflects significant dissatisfaction among respondents with the claim settlement timelines of insurance companies. Three indicators as "Quick response from the insurance regarding the

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loss", "Proper facilitation after information about the loss", and "On-time evaluation of the loss by technical experts or a loss assessor", all received an index value of -0.28, ranking them jointly in the eighth position. This pattern suggests a widely shared concern about the delay and inefficiency in the loss assessment and response processes.

The findings reveal a generally mixed perception among farmers regarding the performance of insurance companies in agricultural insurance services. These findings align with the findings by Malini and Ibrahim (2021) reported that many farmers perceive insurance compensation to take very long i.e., above 2 years, suggesting structural delays in claims processing; additionally, Biswal and Bahinipati (2022) emphasized farmers' lack of confidence in methods of assessment of crop loss, insufficient claim payment, and delay in processing insurance claims in developing countries, including India. These delays erode trust and reduce satisfaction with agrarian insurance services. Parallel GPPS studies in Ghana also identified low awareness, information asymmetry, and poor claim procedures as key barriers to insurance acceptability (Owusu et al., 2021). Accordingly, respondents' negative perceptions in areas like policy renewal notifications (Index –0.16), monitoring and evaluation (Index – 0.15), and doubtful clarity about policy terms reflect broader, systemic shortcomings in communication and operational practices. To elevate service quality and farmer trust, insurers must urgently address these service delivery gaps through timelier claim handling, better documentation support, and proactive client communication (Biswal and Bahinipati, 2022).

Conclusion and Recommendations

Conclusion

In conclusion, this study is intended to examine farmers' attitudes on paddy insurance and assess their perception of the effectiveness of the institutional role in Chitwan and Bardiya districts. The results show that considerable heterogeneity in socio-demographic conditions exists between two districts, where Chitwan exhibits better educational attainment and Bardiya has greater ethnic diversity and higher illiteracy. The illiteracy situation primarily exists due to lack of educational importance in farmers and socio-economic factors. The respondents indicated positive thoughts on the government initiation of crop insurance. Although the negative attitude of respondents on crop insurance was more pronounced regarding the amount of compensation and timely disbursement. The negative perception of timely payout settlement and compensation amount compared to actual losses is due to weak institutional coordination and procedural complexity. Respondents indicated satisfaction with the premium rate fixed and amendments of perils of insurance policies by Nepal Insurance Authority. Nevertheless, the making role, quick decision-making role of the Nepal Insurance Authority on dispute settlement between farmers and the insurance company is weak. Moreover, the performance and role of Nepal Insurance Authority are negative collectively. The weak perceived role of Nepal Insurance Authority may be caused by lack of agricultural insurance grievance mechanism, institutional Capacity Constraints, and weak monitoring and follow-up mechanisms. Furthermore, timely availability of insurance policies, and only necessary documents demanded by the insurance company, are the positive responses of farmers regarding the insurance company. Whereas, delayed loss assessment and timely payout of

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claim amount are perceived by farmers. This may be due to lack of trained loss assessors, procedural complexity in loss assessment, lack of technology in loss verification, and poor coordination among stakeholders.

Recommendations

Based on the findings of the study, government agencies should enhance the literacy and awareness programs to upgrade farmers' knowledge of insurance policies, insurance enrollment, and claim process. Insurance companies need to apply standardized technology-based loss assessment mechanisms and assign trained loss assessors to overcome delay payout of claim amounts and farmers' discontent. Nepal Insurance Authority needs to simplify procedural complexity to enhance the uptake of paddy crop insurance policy. Furthermore, Nepal Insurance Authority should play an active role in dispute resolution between farmers and insurance companies. The crop, livestock, and herbal insurance directive should be amended to address strong coordination between stakeholders and the provision of monitoring mechanisms.

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