

Perceived Effects of Farmer-Herder Conflicts on the Livelihoods of Farming Households in Oyo State, Nigeria

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Abstract

This study examined the perceived effects of farmer-herder conflicts on the livelihoods of farming households in Oyo State, Nigeria. A multistage sampling procedure was used to select 280 respondents comprising 152 crop farmers and 128 herders. Primary data were collected using a structured interview schedule. Descriptive statistics were used to describe causes of farmer-herder conflicts, effects of farmer-herder conflicts on the livelihoods of farming households, and mitigation measures for resolution of farmer-herder conflicts. Pearson Product-Moment Correlation (r), regression coefficient (β) and t -test analyses were employed to test the study hypotheses. Economic effects of farmer-herder conflicts ranked highest among farmers (Weighted Mean Score, WMS = 4.69) and herders (WMS = 4.05). The major effects on livelihoods included reduced crop and livestock production ($\beta = -0.652$), and increased production costs ($\beta = -0.365$). Significant relationships existed between selected socioeconomic characteristics and the perceived effects of farmer-herder conflicts on livelihoods, including age (farmers: $r = -0.712$, $p = 0.021$; herders: $r = -0.613$, $p = 0.032$), years of formal education (farmers: $r = -0.693$, $p = 0.023$; herders: $r = -0.440$, $p = 0.028$). Crop farmers reported significantly greater perceived livelihood effects than herders ($t = 8.15$, $p < 0.05$). The study concludes that persistent farmer-herder conflicts undermine sustainable agricultural production and livelihood resilience. The study recommends the promotion of ranching systems and strengthened conflict-resolution mechanisms to enhance agricultural production and improve the resilience of farming households in Oyo State, Nigeria.

Keywords: Perceived Effects; Farmer-Herder Conflicts; Livelihoods; Farming Households; Oyo State; Nigeria.

Introduction

Agriculture remains the foundational to food security, employment generation, rural livelihoods, and economic development, particularly in developing countries. In Nigeria, the sector contributed approximately 22.61% to the Gross Domestic Product (GDP) in the second quarter of 2024 and employed about two thirds of the national labour force (National Bureau of Statistics, 2024). As the principal source of livelihood for many rural households, the performance of the agricultural sector is closely linked to national food security and sustainable rural development. However, the sector has increasingly been threatened by persistent farmer-herder conflicts. According to Homer-Dixon's (1999) Resource Scarcity Theory, competition over scarce natural resources, particularly land and water, increases the likelihood of violent conflict where resource governance is weak. In Nigeria, climate

variability, population growth, land degradation, and changing land-use patterns have intensified competition between crop farmers and pastoralists (Food and Agriculture Organization of the United Nations [FAO], 2023). Consequently, farmer-herder conflicts have become more frequent, resulting in crop destruction, livestock losses, displacement of households, disruption of agricultural activities, declining farm productivity, food insecurity, and reduced household incomes, thereby undermining rural livelihoods and sustainable agricultural development (Nnaji *et al*; 2022; Fadare, *et al*; 2024).

Although previous studies have documented the causes and security implications of farmer-herder conflicts in Nigeria, comparatively limited empirical evidence exists on their perceived livelihood effects from the perspectives of both crop farmers and herders, particularly in Oyo State. Existing studies have largely focused on conflict drivers and agricultural production, with relatively less attention given to the comparative environmental and economic effects of the conflicts on the livelihoods of the affected groups. This gap limits the availability of context-specific evidence needed to support effective land-use planning, agricultural policy, and community-based conflict management.

Against this background, this study examined the perceived effects of farmer-herder conflicts on the livelihoods of farming households in Oyo State, Nigeria by describing the socioeconomic characteristics of crop farmers and herders, determining the frequency and causes of farmer-herder conflicts, assessing their perceived effects on livelihoods, and identifying the mitigation measures adopted for conflict management. The findings are expected to provide evidence for policies and interventions aimed at improving rural livelihoods, strengthening agricultural resilience, enhancing food security, and promoting peaceful coexistence between farming and pastoral communities.

Materials and Methods

The study was conducted in Oyo State, Nigeria, located in the South-West geopolitical zone between latitudes 7°03'N and 8°12'N and longitudes 2°47'E and 4°23'E. The State covers approximately 28,454 km² and comprises 33 Local Government Areas. The Oyo State Agricultural Development Programme (OYSADEP) divides the state into four agricultural zones: Ibadan/Ibarapa, Ogbomoso, Oyo, and Saki. Oyo State supports diverse crop and livestock production and was selected because of the coexistence of farming and pastoral communities and the persistent occurrence of farmer-herder conflicts. A multistage sampling procedure was used to select crop farmers. Two of the four agricultural zones, Ogbomoso and Oyo, were selected through simple random sampling. Three blocks were subsequently selected from each zone, followed by the random selection of 25% of cells within each selected block and 25% of registered farming households within the selected cells. This procedure yielded 152 crop farmers. Because a comprehensive sampling frame for herders was unavailable due to their large unregistered and mobile nature, purposive and snowball sampling techniques were used to select 128 herders. The final sample comprised 280 respondents (152 crop farmers and 128 herders). Primary data were collected using a structured interview schedule covering socioeconomic characteristics, conflict frequency and causes, perceived livelihood effects, and mitigation strategies. Interviews were conducted with the assistance of interpreters. Data were analysed using the Statistical Package for the Social Sciences (SPSS). Frequencies, percentages, means, and standard deviations were used for descriptive analysis, while Weighted Mean Scores (WMS) were used to assess and rank perceived conflict causes, livelihood effects, and mitigation strategies. Pearson Product-Moment Correlation (PPMC) was used to examine relationships between selected socioeconomic characteristics and perceived livelihood effects, while an independent-sample t-test was used to compare perceived effects between crop farmers and herders. Statistical significance was assessed at $p < 0.05$.

Results and Discussion

Socioeconomic Characteristics of the Respondents

Respondents' Age

The results presented in Table 1 revealed that a high proportion of crop farmers (33.6%) were aged 41-50 years, followed by 51-60 years (31.0%), whereas high proportion of herders (47.7%) were aged 21-30 years, followed by 31-40 years (25.8%). The mean ages of crop farmers and herders were 51.7 and 30.4 years, respectively, indicating that crop farming were dominated by middle-aged and older adults, while pastoralism was largely undertaken by younger adults. This age profile suggests that younger farmers may be more vulnerable to conflict-induced production losses, income decline, and food insecurity because of reduced capacity to recover from livelihood shocks. Conversely, the younger age profile of herders may facilitate herd mobility over shared grazing resources. These findings agree with the Dabo *et al.* (2024) reported that age influenced food security status among farmers and herders, while Adeleke and Adefarati (2022) identified crop grazing, farm destruction and reduced crop yield as major conflict-related concerns among farmers in Oyo State. The observed relationships may reflect differences in conflict exposure, productive assets and household coping strategies.

Respondents' Years of Formal Education

Table 1 further reveals that 42.1% crop farmers had 7-12 years of formal education, followed by 1-6 years (34.2%) and more than 12 years (22.4%), whereas the majority of herders (68.0%) had no formal education, followed by 1-6 years (29.7%). The mean years of formal education were 9.0 years for crop farmers and 1.3 years for herders, indicating considerably higher educational attainment among crop farmers. The farmers' high educational level may enhance access to information, adoption of improved agricultural technologies, and livelihood diversification, thereby increasing their resilience to farmer-herder conflict-induced shocks. Conversely, the low educational level among herders may limit access to information and institutional support, increasing livelihood vulnerability. These findings agree with Adeleke and Adefarati (2022), who reported higher educational attainment among arable crop farmers in Oyo State, while FAO (2023), IFAD (2023), and Olaleye *et al.* (2024) emphasized the contribution of education to agricultural innovation, adaptive capacity, and rural livelihood resilience.

Respondents' Household Size

In addition, Table 1 reveals that 42.1% crop farmers had 4-7 household members, whereas the 48.4% of herders had 8-11 household members. The mean household size was 6 people for farmers, and 9 people for herders, indicating relatively larger households among herders. Household size has important livelihood implications, as larger households may increase the availability of family labour for crop and livestock production but also place greater pressure on household resources during farmer-herder conflicts, thereby increasing vulnerability to conflict-induced livelihood disruptions. Conversely, the relatively smaller households of crop farmers may reduce dependency pressures but could limit family labour availability. These findings corroborate Adeleke and Adefarati (2022) and are consistent with FAO (2023) and IFAD (2023), which emphasized that household size influences labour availability, livelihood strategies, and the resilience of rural households.

Respondents' Farm Size and Herd Size

Table 1 shows that 42.0% crop farmers cultivated 3-5 ha of farmland, followed by less than 3 ha (34.0%), whereas almost all herders (98.4%) owned more than 11 cattle. The mean farm size was 4 ha, while the mean herd size was 39.5 cattle, indicating that crop farmers were

predominantly small- to medium-scale producers, whereas herders generally maintained relatively large cattle herds. Farm and herd sizes are key productive assets influencing household income and livelihood resilience. Although larger farm sizes were less severely affected by farmer-herder conflicts, possibly because they had greater resources to protect their farms and enforce property rights, smaller farm holdings may be more vulnerable to the livelihood consequences of cattle encroachment because farmers with limited productive assets may have fewer resources to protect their farms and recover from crop losses. Likewise, although larger herds may incur greater absolute losses from cattle theft, such losses may have more severe livelihood consequences for households with smaller herds because they may represent a larger proportion of their livestock assets and livelihood resources. This is consistent with Adeleke and Adefarati (2022) and Dabo *et al.* (2024), who linked farmer-herder conflicts and productive assets with crop losses and food-security outcomes, while FAO (2023) and IFAD (2023) emphasized the adverse effects of conflict on rural livelihoods and food security.

Table 1: Distribution of Respondents by Socioeconomic Characteristics

Socioeconomic Characteristics	Farmers (n=152)		Mean	Herders (n=128)		Mean
	Frequency	(%)		Frequency	(%)	
Age (years)						
≤ 20	0	0.0	51.7 years	14	11.0	30.4 years
21-30	4	2.6		61	47.7	
31-40	13	8.5		33	25.8	
41-50	51	33.6		10	7.8	
51-60	47	31.0		6	4.7	
≥ 61	37	24.3		4	3.0	
Years spent in schooling						
0	2	1.3	9 years	87	68.0	1.3 years
1-6	52	34.2		38	29.7	
7-12	64	42.1		3	2.3	
Above 12	34	22.4		0	0.0	
Household size (people)						
≤ 3	42	27.6	6 people	9	7.1	9 people
4-7	64	42.1		31	24.2	
8-11	26	17.1		62	48.4	
≥ 12	20	13.2		26	20.3	
Farm size (ha) and herd size (cattle)						
< 3	52	34.0	4 hectares			39.5 cattle
3-5	64	42.0				
5-7	26	17.0				
7-9	10	7.0		2	1.6	
Above 9				126	98.4	

Source: Field Survey, 2025

Frequency of Farmer-Herder Conflicts

Table 2 shows that 60.5% of crop farmers experienced 11-15 conflict incidents, whereas 46.1% of the herders experienced 1-5 incidents. The estimated mean conflict frequency was 11.07 ± 3.32 for crop farmers and 8.47 ± 5.08 for herders, indicating that crop farmers experienced conflicts more frequently than herders. This suggests greater exposure of crop farmers to repeated crop destruction caused by cattle encroachment on farmlands, while herders experienced recurrent constraints to livestock production and grazing access and cattle security. Consequently, frequent farmer-herder conflicts reduce agricultural productivity, household income, food security, and the livelihood resilience of both crop farming and pastoral households. This finding corroborates Adeleke and Adefarati (2022), Nnaji *et al.* (2022), and FAO (2023), which reported that recurrent farmer-herder conflicts adversely affect agricultural production, food security, and rural livelihoods in Nigeria.

Table 2: Distribution of Respondents by Frequency of Farmer-Herder Conflicts

Crop farmers (n = 152)		Herders (n= 128)	
Number of Crop farmers Times Conflicts Occurred		Mean	Herders Mean
1-5	10* (6.6)	11.07 ± 3.32	59 (46.1)
6-10	46 (30.3)		28 (21.9)
11-15	92 (60.5)		39 (30.5)
16-20	3 (2.0)		1 (0.8)
21-25	1 (0.7)		1 (0.8)

Source: Field Survey, 2025

***(Percentages in parentheses)**

Respondents' Perceived Causes of Farmer-Herder Conflicts

Table 3 reveals that environmental factors were perceived as the leading causes of crop farmer-herder conflicts by both crop farmers (WMS = 1.00; 1st) and herders (WMS = 1.00; 1st), indicating that environmental factors such as competition for land and water resources, crop destruction by cattle, climate variability, and shrinking grazing areas remain the principal drivers of conflict. Crop farmers further ranked technological factors (WMS = 0.95), political and institutional factors (WMS = 0.90), and security factors (WMS=0.89) highly, whereas herders identified technological factors (WMS = 0.80), demographic factors (WMS = 0.79), and security factors (WMS = 0.78) as the next most important causes. Cultural and historical factors received the lowest ratings from both groups. Overall, the findings demonstrate that farmer-herder conflicts are primarily driven by competition for natural resources but are reinforced by technological constraints, demographic pressure, institutional weakness, and insecurity, thereby reducing crop and livestock productivity, household income, food security, and the livelihood resilience of both farming and pastoral households. These findings corroborate Nnaji *et al.* (2022) and Balarabe *et al.* (2024), and are consistent with the Food and Agriculture Organization (FAO, 2023) and the International Crisis Group (2025), which identified resource competition, weak governance, and environmental stress as major drivers of farmer-herder conflicts in Nigeria.

Table 3: Perceived Causes of Farmer-Herder Conflicts

Crop Farmers Herders						
Category of Causes	Indicators	WMS	Rank	WMS	Rank	
Environmental factors	Competition for land and water resources, crop destruction by cattle; scarcity of grazing land, climate variability; encroachment on farmland	1.00	1st	1.00	1 st	
Technological factors	Lack of ranching facilities; inadequate pasture development, poor livestock management; weak extension services	0.95	2nd	0.80	2 nd	
Political and institutional factors	Weak land administration poor enforcement of grazing regulations; inadequate government intervention; weak conflict-resolution mechanisms	0.90	3rd	0.67	5 th	
Security factors	Cattle rustling; crop theft, banditry; reprisal attacks; weak rural security	0.89	4th	0.78	4 th	
Demographic factors	Population growth; expansion of cultivated land; increasing livestock population, pressure on natural resources	0.82	5th	0.79	3 rd	
Cultural and historical factors	Ethnic differences; historical grievances; poor communication; lack of mutual trust	0.70	6th	0.65	6 th	

Source: Field Survey, 2025

Perceived Effects of Farmer-Herder Conflicts on Respondents' Livelihoods

Table 4 shows that farmer-herder conflicts had significant multidimensional effects on the livelihoods of both crop farmers and herders in the study area, although crop farmers consistently perceived greater impacts across all dimensions. Economic effects were the most severe (farmers; WMS = 4.69; herders: WMS = 4.05), reflecting reduced household income, loss of productive assets, increased production costs, and declining agricultural productivity, consistent with previous studies (Okoli and Atelhe, 2014; International Crisis Group, 2025). Environmental effects ranked second (farmers: WMS = 4.46; herders: WMS = 3.87), indicating that land degradation and competition for natural resources threaten sustainable agricultural production (FAO, 2023; Ayandele *et al.*; 2024). Food security, psychological, humanitarian, and social effects further weakened household livelihoods through food shortages, fear, displacement, and erosion of social cohesion. Overall, the findings indicate that farmer-herder conflicts significantly weaken the livelihood assets and resilience of both farming and pastoral households in Oyo State by reducing income, degrading productive resources, compromising food security, and disrupting social well-being. These findings underscore the need for integrated conflict management, sustainable natural resource

governance, and livelihood support interventions to promote resilient rural livelihood

Table 4: Perceived Effects of Farmer-Herder Conflicts on Respondents' Livelihoods

Perceived effects	Indicators	Crop Farmers (WMS)	Rank	Herders (WMS)	Rank
Economic effects	Reduced household income, loss of crops and livestock, increased production costs, reduced farm productivity	4.69	1 st	4.05	1st
Environmental effects	Land degradation, destruction of vegetation, overgrazing, soil fertility decline, competition for land and water	4.46	2 nd	3.87	2nd
Food security effects	Reduced food production, food shortages, hunger, poor dietary diversity	4.17	3 rd	3.02	4th
Psychological effects	Fear of attacks, anxiety, trauma, emotional stress, uncertainty about livelihoods	4.06	4 th	3.01	5th
Humanitarian effects	Loss of human lives, physical injuries, food insecurity, hunger and malnutrition	3.96	5 th	3.01	5th
Social effects	Breakdown of social cohesion, restricted freedom movement, reduced participation in community development	3.79	6 th	3.43	3rd

WMS – Weighted Mean Score

Source: Field Survey, 2025

Multiple Regression Analysis of the Perceived Effects of Farmer-Herder Conflicts on the Livelihoods of Farming Households

The results in Table 5 show that farmer-herder conflicts were significantly associated with multiple dimensions of the livelihoods of farming households in Oyo State. Among crop farmers, all eight perceived livelihood-effect indicators were statistically significant ($p < .05$), indicating significant associations with reductions in production, increased production costs, decreased income, water pollution, reduced investment capacity, malnutrition and limited access to food, unsafe farming environments, and increased poverty. Among herders, seven of the eight were statistically significant ($p < .05$), while reduction in crop and livestock production was not significant ($\beta = -0.841$, $p = 0.310$). Overall, the findings demonstrate that the perceived effects of farmer-herder conflicts extended beyond production losses to economic, food-security, environmental and household welfare dimensions among farming households in Oyo State.

Table 5: Multiple Regression Analysis of the Perceived Effects of Farmer-Herder Conflicts on the Livelihoods of Farming Households

S/N	Perceived livelihood-effect indicators	Crop farmers β	p-value	Decision	Herders β	p-value	Decision
1	Reduction in crop and livestock production	-0.652	0.001	Significant	-0.841	0.310	Not Significant
2	Increased production costs	-0.365	0.001	Significant	-0.881	0.021	Significant
3	Decreased income	-0.310	0.001	Significant	-0.136	0.021	Significant
4	Water pollution	-0.054	0.001	Significant	-0.731	0.001	Significant
5	Reduced ability to invest in farm improvement	-0.841	0.001	Significant	-0.054	0.001	Significant
6	Malnutrition and limited access to food	-0.122	0.005	Significant	-0.263	0.001	Significant
7	Unsafe environment for farming	-0.641	0.001	Significant	-0.561	0.001	Significant
8	Increased poverty	-0.672	0.001	Significant	-0.731	0.001	Significant

Source: Field Survey, 2025

Note: β = Standardized regression coefficient; $p < .05$ indicates statistical significance.

S/N	Perceived mitigation strategies	Crop farmers (n=152) Mean $\pm$ SD	Rank	Herders (n=128) Mean $\pm$ SD	Rank
1	Regular farmer-herder dialogue and communication	4.58 $\pm$ 0.74	1 st	4.63 $\pm$ 0.67	1 st
2	Community-based peace and conflict-resolution committees	4.43 $\pm$ 0.99	2 nd	4.51 $\pm$ 0.77	2 nd
3	Participatory land-use planning and clear demarcation of farming and livestock	4.39 $\pm$ 0.980	3 rd	4.26 $\pm$ 0.98	3 rd
4	Establishment and rehabilitation of designated grazing reserves and livestock routes	4.31 $\pm$ 0.83	4 th	4.29 $\pm$ 0.99	4 th
5	Mediation and alternative dispute-resolution mechanisms	4.24 $\pm$ 0.84	5 th	4.30 $\pm$ 0.90	5 th
6	Regular inclusive farmer-herder stakeholder meetings for dialogue and conflict prevention	4.17 $\pm$ 0.76	6 th	4.22 $\pm$ 0.89	6 th
7	Early-warning, early-response and information-	4.08 $\pm$ 0.85	7 th	4.15 $\pm$ 0.82	7 th

sharing mechanisms

Perceived Mitigation Strategies for Addressing Farmer-Herder Conflicts

The results in Table 6 show that all the identified mitigation strategies recorded mean scores above the 3.00 decision benchmark among both crop farmers and herders, indicating general agreement on their relevance to addressing farmer-herder conflicts. Dialogue and communication ranked first among crop farmers (Mean = 4.58) and herders (Mean = 4.63), followed by community-based peace and conflict-resolution committees (4.43 and 4.51, respectively). Participatory land-use planning and clear demarcation of farming and livestock-use areas also recorded high mean scores (4.39 and 4.26). Overall, the findings indicate that dialogue, community-based conflict-resolution mechanisms, participatory land-use planning, and mediation were widely perceived as important strategies for mitigating farmer-herder conflicts in Oyo State.

Table 6: Perceived Mitigation Strategies for Addressing Farmer-Herder Conflicts among Crop Farmers and Herders

Source: Field Survey, 2025

Note: SA= Strongly Agree (5); A= Agree (4); U = Undecided (3); D = Disagree (2); SD = Strongly Disagree (1). Mean score of ≥ 3.00 indicates acceptance of the strategies, while mean score < 3.00 indicates non-acceptance. SD= Standard deviation.

Hypothesis Testing

H0₁: There is no significant relationship between selected socioeconomic characteristics of respondents and the perceived effects of farmer-herder conflicts on the livelihoods of farming households.

Relationship between selected socioeconomic characteristics of respondents and the perceived effects of farmer-herder conflicts on the livelihoods of farming households.

The Pearson Product-Moment Correlation (PPMC) results presented in Table 7 revealed that selected socioeconomic characteristics were significantly associated with the perceived effects of farmer-herder conflicts on the livelihoods of both crop farmers and herders. Age was negatively and significantly related to the perceived livelihood effects among crop farmers ($r = -0.712$, $p = 0.021$) and herders ($r = -0.613$, $p = 0.032$), indicating that older respondents perceived less severe livelihood effects than younger respondents. This finding indicates that accumulated farming or herding experience and greater access to livelihood resources may have enhanced respondents' capacity to cope with and recover from the adverse effects of farmer-herder conflicts. Dabo *et al.* (2024) reported a similar influence of age on livelihood outcomes and food security among conflict-affected farming households. Similarly, farming experience among crop farmers ($r = -0.282$, $p = 0.001$) and herding experience among herders ($r = -0.361$, $p = 0.001$) exhibited significant negative relationships with the perceived effects. This suggests that respondents with longer farming or herding experience perceived less severe livelihood effects, possibly because prolonged engagement in agricultural production enhances practical knowledge, risk management skills, and adaptive strategies for responding to recurrent conflicts. This finding is consistent with Olabisi *et al.* (2023), who reported that experience and adaptive management strengthen rural households' resilience and influence production decision in conflict-prone environment.

Years of formal education also exhibited a significant negative relationship with the perceived livelihood effects among crop farmers ($r = -0.693$, $p = 0.023$) and herders ($r = -0.420$, $p = 0.028$). This indicates that education may improve access to information, agricultural innovations, extensions services, and livelihood diversification opportunities, thereby strengthening households' adaptive capacity and reducing vulnerability to conflicts,

Babatude *et al.* (2024).

Conversely, household size was positively and significantly related to the perceived livelihood effects among crop farmers ($r = 0.413$, $p = 0.012$) and herders ($r = 0.363$, $p = 0.001$), implying that respondents with larger households experienced greater livelihood disruptions because of higher dependency and consumption demands.

Farm size among crop farmers ($r = -0.251$, $p = 0.001$) and herd size among herders ($r = -0.234$, $p = 0.001$) were negatively and significantly associated with the perceived livelihood effect, indicating that households with larger productive assets were better able to withstand and recover from conflict-related livelihood losses. This finding is consistent with Olabisi *et al.* (2023), who reported that productive assets enhance adaptive capacity and influence production decision conflict-prone environments.

Overall, the findings demonstrate that age, farming or herding experiences, educational attainments, household size and productive assets significantly influence households' vulnerability and resilience to farmer-herder conflicts. Therefore, the null hypothesis (H_{01}) was rejected, indicating that selected socioeconomic characteristics significantly influenced the perceived effects of farmer-herder conflicts on the livelihoods of farming households while the alternative hypothesis was accepted. That is, there is a significant relationship between the selected socioeconomic characteristics of respondents and the perceived effects of farmer-herder conflicts on the livelihoods of farming households.

Table 7: Pearson Product- Moment Correlation between Respondents' Socioeconomic Characteristics and the Perceived Effects of Farmer-Herder Conflicts on Farming Households' Livelihood

Variables	Crop Farmers r-value	p-value	Remarks	Herders r-value	p-value	Remarks
Age	-0.712	0.021	Significant	-0.613	0.032	Significant
Farming experience and herding experience	-0.282	0.001	Significant	-0.361	0.001	Significant
Years of formal education	-0.693	0.023	Significant	-0.420	0.028	Significant
Household size	0.413	0.012	Significant	0.363	0.026	Significant
Farm size and herd size	0.251	0.001	Significant	-0.234	0.001	Significant

Source: Field Survey, 2025

**Correlation is Significant at 1% level

* Correlation is Significant at 5% level

H₀₂: There is no significant difference in the perceived effects of farmer-herder conflicts between crop farmers and herders in the study area

The independent- samples t-test presented in Table 8 revealed a statistically significant difference in the perceived effects of farmer-herder conflicts between crop farmers and herders in the study area, covering the Ogbomoso and Oyo Agricultural Zones. Crop farmers recorded a higher mean perceived-effect score (66.13) than herders (33.06). The observed difference was statistically significant ($t(278) = 8.150$, $p = 0.001$). Consequently, the null hypothesis, which stated that there was no significant difference in the perceived effects of farmer-herder conflicts between crop farmers and herders in the study area, was rejected at the 5% level of significance.

The finding indicates that crop farmers reported greater perceived effects of farmer-herder conflicts than herders did. This finding complements the descriptive results, which showed higher livelihood-effect scores among crop farmers across the assessed dimensions. Overall, the result suggests that the perceived livelihood effects of farmer-herder differed significantly

between the two respondent groups.

Table 8: Independent-sampled t-Test of Differences in the Perceived Effects of Farmer-Herder Conflicts between Crop Farmers and Herders

Respondent categories	N	Mean	T	Df	P	Decision
Crop farmers	152	66.13	8.150**	278	0.001	Reject H ₀
Herders	128	33.06				

Source: Field Survey, 2025

Note. H₀: There is no significant difference in the perceived effects of farmer-herder conflicts between crop farmers and herders; $p < 0.05$ indicates statistical significance.

Conclusion and Recommendations

The study concludes that farmer-herder conflicts significantly affect the livelihoods of farming households in Oyo State, with crop farmers perceiving greater livelihood effects than herders. Economic effects were the most prominent between both groups, followed by environmental effects. The conflicts were also associated with increased production costs decreased income, food insecurity, environmental degradation, and reduced livelihood resilience. The significant relationships between socioeconomic characteristics and perceived livelihood effects further indicate that age, education, household size, farming and herding experience, and productive assets influence households' vulnerability and capacity to cope with conflict-related shocks. The significant difference between crop farmers and herders confirms that the livelihood consequences of the conflicts are not uniform across the two groups.

Based on these findings, the study recommends that:

1. Government and agricultural extension agencies should strengthen farmer-herder dialogue, conflict-prevention education, and community-based mediation mechanisms to reduce recurrent conflicts.
2. Effective land-use planning, designated grazing reserves or ranching systems, and clear demarcation of farming and livestock-use areas should be promoted to reduce competition over land and water.
3. Conflict-affected farming households should receive targeted livelihood support, including agricultural inputs, accessible credit, and appropriate recovery assistance, to restore production and strengthen livelihood resilience.
4. Community-based early-warning and conflict-resolution systems should be strengthening, particularly in areas where crop farmers and herders frequently interact, to facilitate early intervention and peaceful resolution of disputes.

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