

## **Land Use Conflict between Farmers and Herdsmen in Gwer West Local Government Area of Benue State, Nigeria**

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**Abstract:** *The study was conducted in Gwer-West Local Government Area of Benue State to investigate the causes of farmers- herdsmen and use conflict that is common in many parts of Nigeria. Such conflict has caused a lot of losses to Nigeria, the state, and local communities. Using simple random and purposive sampling techniques, 80 farmers and 20 herdsmen were selected from communities. Data were collected using a structured questionnaire and were analyzed using both descriptive and inferential statistics. The result revealed that the major causes of farmers-herders conflict in the study area include destruction of crops by cattle, contamination of streams by cattledungs, female sexual harassment by herdsmen, harassment of herdsmen by youths of host communities, cattle rustling by host communities, and indiscriminate bush burning by herdsmen. Most respondents suffered various effects as a result of their mutual conflict. The effects on both sides ranged from physical, economic, to socio-psychological. Loss of material resources were more widespread among farmers and this include loss of crop yield and income of farmer, displacement of farmers, loss of lives and property and loss of products in storage. On the part of herdsmen, losses whether material or not-were minimal. The study revealed that three types of coping strategies were mostly adopted by the two groups. These are problem orientated coping strategy (POCS), emotion orientated coping strategy (EOCS), and social support seeking coping strategy (SSSCS). It was found that the average use score of problem-orientated coping strategies (POCS) and social support-seeking coping strategies (SSSCS) were higher for farmers compared to herdsmen implying that on average, farmers use more of these strategies since they encountered more conflict-related problems than herdsmen. On the other hand, the average use score in respect of emotion-orientated coping strategies (EOCS) was higher (70.1%) for herdsmen than farmers (29.9%) implying that herdsmen basically used emotion-orientated strategies which is an indication of a strong emotional attachment to the cattle among the Fulani tribe in Nigeria. The result of the probit regression model revealed that several factors were responsible for the use of coping strategies among the two groups. Age, income, and farm size significantly influenced the use of most of the coping strategies among the respondents. The study recommends that coping strategies should be incorporated into the mainstream activities of farmer-herdsmen conflict management.*

**Keywords:** *Conflict, Herdsmen, Farmers, Coping strategies, Probit model, Nigeria*

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### **I. Introduction**

Sustainable production of agricultural products requires the prevalence of peaceful co-habitation among farmers and other settlers in their community. The disruption of agricultural productivity as a result of conflict between farmers and herdsmen hampers development, reduces agricultural productivity which may lead to poverty. Competition-driven conflicts between arable crop farmers and cattle herdsmen have become common occurrences in many parts of Nigeria. [1] found that conflicts over agricultural land use between farmers and herdsmen accounted for 35percent of all reported crises in Nigeria. Politico-religious and ethnic clashes occurred at lower frequencies. A conflict study of 27communities in North-Central Nigeria showed that over 40%of the households surveyed had experienced agricultural land related conflicts, with respondents recalling conflicts that were as far back as 1965.

The Fulani cattle herdsmen have identified conflicts arising from land use as the “most important” problem they face in their occupation [2]. The pastoral Fulani move about with their cattle throughout of the year for pastures because of desert encroachment (desertification) of the Sahel region caused by climate change. This causes menace posed by herdsmen in the different communities they migrate to for purposes of grazing their cattle. They are more and more constituting major security challenges to their host communities. The frequency of farmer-herdsmen conflict is increasing by the day and this posts security challenge in some communities and States in Nigeria. The scenario is most succinctly portrayed by [3] who reported that recently “there have been escalations of reported attacks by Fulani herdsmen who brutally kill natives of the invaded farming communities including women and children in various States across the country. Worst affected States

include Benue, Nasarawa, Plateau, Taraba, Kaduna, Adamawa, Zamfara, amongst others. The causes of farmer-herdsmen conflicts are often not far-fetched. However, there appears to be no consensus among both groups as to the causes of their mutual conflict. According to [4], destruction of crops by cattle are the main direct causes of conflicts cited by the farmers, whereas burning of rangelands and “*fadama*” and blockage of stock routes and water points by crop encroachment are important direct reasons cited by the pastoralists.

Communal conflicts between Fulani herdsmen and host communities usually arise when grazing cattle are not properly controlled and consequently graze on cultivated crops like cassava, maize, rice and other cereals of host communities. Attempts by the owners of such farms to register their grievance of destruction of their livelihood (food crops and cash crops) by the cattle of Fulani herdsmen is always stoutly resisted thereby degenerating into communal conflicts. Host communities sometimes register their grievances by placing restrictions on movement and grazing of cattle in designated areas and enforcing compliance through coercive measures decreed by the host community. The decree may take the shape of killing stray cattle or arresting and prosecution defaulters. When the communities attempt to moderate their activities or request their exit, the Fulani herdsmen usually become aggressive and attack the host community sometimes with the assistance of hired mercenaries. The attack often occur at midnight making the host is more vulnerable.

In recent time, much violence and heavy casualty communal conflicts triggered by Fulani herdsmen occurred in the middle-belt of Nigeria particularly Benue State in which over 72 lives were lost to Fulani militia in one conflict. In general, the communal conflicts orchestrated by Fulani herdsmen in Benue State had claimed the lives of more than 5000 victims in the first half in the year 2014. The victims include women and children and over 100 communities have been displaced [5], [6]. The relationship between Fulani Herdsmen and the Tiv in Benue State is intensely becoming strained because of incessant attacks on the Tiv by the Fulani with very high human casualties and loss of properties and this had made most landowners in the affected communities to flee their homes in search of safe alternatives. The research seeks to explore the causes of conflict between farmers and the Fulani herdsmen in Gwer- west Local Government Area of Benue State, Nigeria and the implications of this conflict on agriculture productivity. Specifically, the study

- i. examines the socio-economic characteristic of the respondents in the study area;
- ii. assess the causes of conflict between farmers and herdsmen in the study area;
- iii. ascertains the effects of the conflict on household and rural development;
- iv. identify coping strategies adopted by the actors in the study area;
- v. estimate factors influencing the use of coping strategies conflict actors; and
- vi. identifies intervention strategies in the resolution of such conflict.

## **II. Methodology**

The study investigated land use conflict between farmers and herdsmen in Gwer- west Local Government Area of Benue State, Nigeria. Gwer-west Local Government Area lies within the transition belt between the equatorial main belt of the Southern Nigeria and semi-arid areas of Northern Nigeria. It is located between longitudes 7.3° and 10°E and latitudes 6° and 8°N with land area of 1,094km<sup>2</sup>. The average annual temperature is 30<sup>0</sup>C with annual rainfall of 2000mm. The population of the people is estimated at 122,145 [7]. The Inhabitants are predominantly Tiv. The primary occupation of the people is farming and major crops grown are yam, rice, millet, maize and other Nigerian staples.

The primary data was collected using structured questionnaire randomly administered to 80 farmers selected from 8 communities from three agricultural zones of the Local Government Area. In addition, twenty (20) nomadic cattle herders were randomly selected from the chosen communities. This gave a sample size of 100 respondents. The Test-retest method was used to determine the reliability of the instrument. This was carried out among 30 respondents. Pearson Product Moment Correlation ( $\delta$ ) was used to obtain a correlation coefficient ( $\delta$ ) of 0.88, which implies that the instrument was reliable. The farmers were selected from the register of the Benue State Agricultural and Rural Development Programme.(BNARDA). The selection was based on the following criteria:

- i. That they have been farming in the community for at least five years.
- ii. That they were aware of the existence and activities of nomadic herders in the study area ; and
- iii. That they represented the diversity of other farmers in the study area.

Coping strategies of the respondents were measured with 20 items on a 4 point Likert-type scale. These include 10 active problem oriented strategies, six avoidant (or emotion oriented) strategies and four support seeking strategies [8], [9]. Respondents were asked to indicate how often they use each of the coping strategy to deal with aftermath of conflict and were scored. Probit model was used to determine the influence of respondents’ socio-economic characteristics on their coping strategies. The three coping strategies were classified as Problem oriented coping strategies (POCS,) Emotion orientated coping strategies (EOCS, and Social support-seeking coping strategies (SSCS)Data were analyzed using descriptive and inferential statistics.

**Model Specification**

The probit model assumes that:

$$\Pr (Y=1/ X=x) =\Phi (x' \beta)$$

Where:

$\Phi$  =is the cumulative distribution of the standard normal distribution,

$\beta$  are parameters typically estimated by maximum likelihood,

$Y$  = Binary outcome variable

$X$  = A vector of regressors.

The use of any coping strategies was manifested through a variable  $Q_i$  such that:

$$Q_i =1, \text{ if } UPOCS \setminus UEOCS \setminus USSCS > t_i$$

$$Q_i =0, \text{ if } UPOCS \setminus UEOCS \setminus USSCS < t_i$$

Where:

$t_i$  =average UPOCS \setminus UEOCS \setminus USSCS which were calculated separately for the two groups

UPOCS= Use of problem orientated strategies

UEOCS= Use of emotion orientated strategies

USSCS= Use of social support seeking strategies.

The use of each categories of the coping strategies as computed for each respondent since the a priori expectation is that a combination of strategies will be employed by both farmers and herdsmen to cope with conflict in agricultural land use. The averagePOCS,EOCS and SSCS for the farmers as well as those of the herdsmen were determined by using their respective sample sizes as the denominators.

**III. Results And Discussion**

***Socio-economic characteristics of Respondents***

Result in Table 1 showed that 58.8% of the farmers were males while females constitute 41.3%. The highest percentage of farmers were those within the age range of 35-50 years (38.0%). The average age of the farmers was 47 years. Among the nomads, majority (90%) were males while 10% were females. The mean age of the nomads was 29 years while the modal age range was 25-30 years accounting for 50%. All this indicates, perhaps, that cattle herding attracts more youth than farming. The result indicated that cattle herding is a male dominated enterprise and this is consistent with the results of [10] who reported all respondent herdsmen as males. This is contrary to the findings in respect of the farmers, where about 41.2% were female. This may be due to the probability that farming is earlier to practise among women, while for socio-cultural factors, most farmer women might not take cattle herding as occupation. The result further revealed that the farmers were more educated than the herdsmen in terms of formal education. Most of the herdsmen had no formal education and none had a tertiary education qualification. The family size ranged from 1 (unmarried) to 20 people. The modal age and mean family size for farmers were 6-10 and nine people respectively, while these figures for herdsmen were 11-15 and 14 people respectively. The implication is that the relatively large family sizes for the two groups may mean more people to cater for and, perhaps also more hands to work on the farm and help with cattle herding.

The two groups exhibited differing occupational characteristics. While most farmers are small scale operators, most herdsmen operated on a relatively higher scale. The average farmer and herdsman in the sample earned ₦14, 692 and ₦21, 102 respectively per annum. This showed that the average farmer and herdsman in the sample lived below the poverty line per annum (\$1=₦365). Farmers in the lowest range of annual enterprise income may however, need to augment their income earning as they were all living below poverty line of \$3 per day by earning below ₦133, 225 per annum which is equivalent to \$3 per day. This confirms the prevalence of poverty among rural farmers in Nigeria, as noted by [11].

**Table1: Socio- economic Characteristics of the Respondents in the Study Area**

VARIABLE	FARMERS (n=80)		HERDSMEN (n=20)	
<b>Gender</b>				
Male	47	58.8	18	90
Female	33	41.2	2	10
<b>Age (years)</b>				
25-30	10	12.5	10	50
31-35	17	21.3	7	35
36-40	10	12.5	3	15
41-45	13	16.3	0	0
45 and above	30	38.0	0	0
<b>Level of education</b>				
Islamic/Arabic	0	0	12	60
No formal education	22	27.5	8	40

Primary education	34	42.5	0	0
Secondary education	19	23.6	0	0
Tertiary education	5	6.4	0	0
<b>Family size</b>				
1-5	16	20.0	4	20
6-10	25	43.8	4	20
11-15	23	28.7	9	45
16-20	6	7.5	3	15
<b>Farm size (hectares)</b>				
<1	5	6.2	NA	NA
1-3	12	15.0	NA	NA
4-6	50	62.5	NA	NA
7-9	9	11.3	NA	NA
10 and above	4	5.0	NA	NA
<b>Herd size</b>				
1-20	NA	NA	2	10.0
21-40	NA	NA	6	30.0
41-60	NA	NA	10	50.0
61-80	NA	NA	2	10.0
<b>Annual income (₦'000)</b>				
50-100	30	37.5	1	5.0
101-150	13	16.3	2	10.0
151-200	9	11.3	3	15.0
201-250	20	25.0	6	30.0
251-300	8	10.0	8	40.0

Frequency

Percentage

Frequency

Percentage

Source: Survey Data, 2017.

Note: mean income of farmers=₦176, 304 and for herder= ₦253, 226.

NA= (Not applicable)

#### *Causes of conflict between farmers and herdsmen*

The major causes of conflict (Table 2) in the study area as indicated by farmers was the disregard for host traditional authorities (Mean=3.5). However, the herders opinion of this as a cause of conflict was low (Mean=1.45). Another major cause as rated by farmers was the destruction of crops by cattle (Mean=3.4). The herdsmen also regarded it as a major cause (Mean=3.2). This is congruent with [12] who stated that the most frequent cause of such conflict is the destruction of crops by cattle. These cattle enter the farm to feed on the foliage of crop even in the presence of the herdsmen who pretend not to notice such destruction. This supports [13] who observed that in the pre-harvest period, cattle frequently destroy or eat ripened crops as they are led from the field to their camps.

Another major cause of conflict as opined by the farmers (Mean=3.3) was contamination of stream by the herds of cattle. The nomadic herders also regarded this as a cause of conflict (Mean=2.5). The stream is the source of domestic water supply for most rural farming communities. The host community members believe that contamination of the stream leads to the outbreak of cholera, typhoid fever and liver fluke. While the farmers (Mean=2.8) regarded over-grazing as a major cause of conflict, the herdsmen (Mean=1.8) did not see it as a main source of conflict. The nomadic herdsmen allow their cattle to graze on fallow land continuously and over-grazing emanates therefrom. This causes erosion on the plot of land thereby making it infertile and difficult to cultivate by the farmers.

The farmers (Mean=2.9) and the herdsmen (Mean=2.8) both regarded female harassment by the nomadic herders as another cause of conflict, especially when cases of rapes were established. Harassment of nomads was rated by both farmers and herders as having caused conflicts. Rape a major cause of conflict is a taboo to every society in the world and in Africa in particular, it is not taken lightly. The nomads who are singles, in a bid to satisfy their thirst for female fall into such temptation. Bush burning which causes destruction to crops on the field was considered as a major source of conflicts between farmers and herders. During the dry season, grasses and forage dry up and the nomads believe that if the dried vegetation is burnt, fresh pasture would regenerate. In the process of burning, the fire spreads into adjoining farms. This, according to the respondents, causes conflict between the affected farmers and the herders as crops on the field are destroyed by the spreading fire.

Indiscriminate defecation by cattle on roads also causes conflict, though both the farmers and herders saw it as a minor cause. Though, earth roads are major road used by rural communities, but they are well cared for. As there nomadic herdsmen take their dung indiscriminately on the roads. This angers the host community

and when the nomads' attention is brought to it they show no response. This again is considered a disregard for the host community traditional authority. Cattle theft or rustling was another major cause of conflict in the farming communities. In every community, there are miscreants. Some of these have been caught stealing bulls and cows by the nomadic herders. This leads to the killing of the thieves. These killings often enraged the host communities. This agrees with [12] who showed in a similar study that frequent loss of cattle to rustlers worsened the already tensed farmer-herder relationship in the Volta Basin. Stray cattle which destroy crops on the field also caused conflicts between farmers and nomadic herdsmen. Farmers in anger slaughter such stray cattle. This has caused a lot of problem between the host farming communities and the nomadic herdsmen who did not always think of the value of the damaged crops, but their cattle.

**Table2: Causes of Conflicts between Farmers and Herdsmen (n=100)**

CAUSES	FARMERS	HERDEMEN
	Mean Score Remark	Mean Score Remarks
1. Destruction of crops	3.4 major cause	3.2 major
2. Contamination of stream by cattle	3.3 major cause	2.5 major
3. Over-grazing of fallow land	2.8 major cause	1.8 minor
4. Disregard to traditional authority	3.5 major cause	1.5 minor
5. Sexual harassment of women by herdsmen	2.9 major cause	2.8 major
6. Harassment of nomads by host youths	3.1 major cause	3.4 major
7. Indiscriminate defecation of cattle on roads	2.1 minor cause	2.9 major
8. Theft of cattle	2.7 major cause	2.9 major
9. Stray cattle	2.9 major cause	3.3 major
10. Indiscriminate bush burning	2.9 major cause	3.3 major

*Source: Survey data, 2017. Cut off score: ≥2.50 (major cause), <2.5 (minor cause)*

***Effects of Conflict on household and rural development***

Most respondents suffered various effects as a result of their mutual conflict. The effects on both sides ranged from physical, economic, to socio-psychological. Conflict outcome experienced include reduction in output and income of farmers, displacement of farmers, erosion, loss of lives and property, arms running, loss of household property and loss of farm produce in storage. As a result of crops destruction or indiscriminate bush burning, many farmers lost part or the whole of their crops. This resulted in reduced yield which translated into low income on the part of the farmers whose sole occupation is farming. This tends to negatively affect their savings, credit re-payment ability, as well as the food security and economic welfare of urban dwellers depend on these farmers for food supply. This discourages the farmers and rural/agricultural development.

There were reports of displaced farmers and herdsmen alike. In the host communities; nomadic herdsmen relocate as a result of conflict. Host farmers, especially women, who remained behind stopped going to the distant farms for fear of attack by the nomads in the bush. Such displaced farmers have become a source of liability to other farmers whom they have to beg for food for themselves and their families. This has created a vicious cycle of poverty in such communities. Loss of material resources were however, more widespread among farmers. Displacement of farmers has the highest score followed by loss of output and income. On the part of the herdsmen, losses-whether material or not- were minimal indicating that farmers experienced more losses than the herdsmen.

Over-grazing (land degradation) as a result of zero grazing exposes the soil and makes it susceptible to erosion which causes loss of soil nutrients and difficulty of cultivation as a result of soil compaction. Loss of lives was another socio-economic effect of conflicts. Some of the victims (young and old) are badly injured or maimed. This has reduced some women farmers to the status of widows. All these have drastically reduced agricultural labour force in the area. In the process, there are reported cases of proliferation of small arms and ammunitions since the host farming communities and the herdsmen saw each other as archenemies. This finding agrees with the report of [14] who reported that twenty seven people lost their lives due to conflicts between nomadic herdsmen and farmers in Kogi State of Nigeria within the period of 1996-2002.

**Table3: Socio Economic Effects between Host Farming Communities and Nomadic Herdsmen (n=80).**

Effects	Total Score	Mean Score	Remarks
Reduction in Output/ income	285	3.56	Major effect
Displacement of farmers	295	3.69	Major effect
Erosion	208	2.60	Major effect
Loss of lives	280	3.50	Major effect
Arms running	205	2.56	Major effect
Loss of household property	200	2.50	Major effect
Loss of stored produce	283	3.54	Major effect

Source: Survey Data, 2017.

### Conflict actors' coping strategies

Coping strategies of respondents were classified into three namely: problem oriented (POCS), emotion oriented (EOCS) and social support seeking coping strategies (SSCS). The use of each strategy among farmers and herdsmen were investigated. Table 4 showed the descriptive statistics of the use of problem oriented strategies among the respondents. Farmers generally used a combination of strategies, as no single strategy is enough to bring the needed succor caused by conflict. Ten strategies were identified, out of which use of job experience (70.6% for farmers and 5.4% for herdsmen) was most often used by the respondents. Herdsmen in the sample generally used less of problem-oriented strategies than the farmers. This perhaps is an indication that farmers considered the conflict situation from the `problem` perspective more than the herdsmen. The herdsmen probably faced less problems or direct consequences of the conflict than the farmers.

Other POCS used by the farmers are: use experience (77.8%), working harder (64.2%), buying food for home consumption (50.5%), and adopting and taking loans from friends and families (45.0%). The importance of job experience came to the fore, as respondents claimed to rely on their previous experiences to cope with the conflict situation. It could imply that respondents with long experience may be able to cope better than their colleagues with lesser experience. The fact that half of the farmers claimed to buy foodstuff for home consumption may indicate the severity of the effect of destruction of their farms. The least used POCS was sale of entire farm/herd (14.7% for farmers and 3.6% for herdsmen). This, together with the findings that 64.2% of the farmers and 37.5% of herdsmen substantially used working harder as a strategy, might indicate the comparative resilience of the respondents in the face of unfavorable situations.

It is worrisome, however, that as much as 24.2% of the farmers adopted `sowing less`, while only about 9.8% of the herdsmen `reduced` their herd size in order to cope with the effects of their mutual conflict. This obviously translates, especially on the part of farmers, into lesser farm output and consequent reduction in food availability, and may indirectly account for rising food prices. Table 3 further shows that the herdsmen were perhaps more security conscious than the farmers. More than the farmers, herdsmen `prepared for the worst`, `tightened security`, and `used charms` as coping strategies. This scenario tends to indicate that herdsmen were probably more bellicose than the farmers.

Table 5 summarizes the use of EOCS among the two groups. Accepting the conflict situation/consequences as act of fate was found to be the most commonly used emotion oriented coping strategy as 63.5% of farmers and 46.5% of the herdsmen used it a great deal. The ability to accept the situation with equanimity among groups is not only a psychological coping strategy, but is also capable of reducing the escalation of violent conflict between the two groups. Both also used prayer for peace, indicating their level of religious attachment. Use of drugs or alcohol was the least used EOCS among the farmers. The rate of drug/alcohol use was however higher among the herdsmen. It is instructive to observe that drug/alcohol use as a coping strategy not only portends undesirable health consequences, it could actually worsen the conflict situation by affecting the behavioral orientation of persons concerned.

It was found that pretenses was not a common coping tool among the respondents as only about 14.6% of farmers and 19.6% of herdsmen used it often. This indicates that both groups generally recognize the need to be realistic in the management of their mutual conflict. Transfer of aggression was not commonly used by the two groups. This collaborates the finding that most respondents accepted the conflict as fate and also a somewhat low level of mutual belligerency among them. Rate of use of `appeasement` was higher among herdsmen than farmers. This might indicate that farmers were more at the receiving end and needed to be appeased by the herdsmen. It also, shows that the herdsmen might be willing to compensate the obviously aggrieved farmers.

It was found that the most commonly used SSSCS was seeking help from friends and relations(60.8% of farmers and 32.2% of herdsmen) to ameliorate the effects of conflict (Table 6). A vast majority of the respondents in each group did not use litigation as a coping strategy, despite the fact that there are regulations regarding the use of agricultural land in the study area. This may be due to the respondents' lack of awareness of their legal rights or their decision to accept the situation as their `fate`.

**Table 4: Descriptive Statistics of Result of Problem Orientated Coping Strategies (POCS)**

Strategies	Used often (%)	Used somewhat (%)	Not used (%)
Borrowed money	<b>45.0</b> (3.6)	<b>33.8</b> (9.5)	<b>21.2</b> (86.9)
Worked Harder	<b>64.2</b> (37.5)	<b>16.7</b> (42.9)	<b>19.1</b> (19.6)
Used Experience	<b>77.8</b> (59.0)	<b>20.1</b> (35.7)	<b>2.1</b> (7.1)
Sold farm/herd	<b>14.7</b> (3.6)	<b>19.8</b> (5.4)	<b>65.5</b> (91.0)
Prepared for the worst	<b>8.8</b> (39.3)	<b>29.4</b> (32.1)	<b>61.8</b> (28.6)
Sowed less/reduce stock	<b>24.2</b> (9.8)	<b>13.1</b> (17.9)	<b>62.7</b> (72.3)
Bought food/ new herd	<b>50.5</b> (14.3)	<b>35.8</b> (16.1)	<b>13.7</b> (69.6)
Used charms	<b>9.9</b> (42.9)	<b>24.2</b> (39.3)	<b>65.9</b> (17.8)
Took another job	<b>70.6</b> (5.4)	<b>14.7</b> (9.0)	<b>14.7</b> (85.6)
Tighten farm/herd security	<b>22.2</b> (33.9)	<b>13.7</b> (55.4)	<b>63.1</b> (10.7)

*Source: Survey Data, 2017. Figures in bold characters are for farmers, while those in parentheses are for the herdsmen.*

**Table 5: Descriptive Statistics of Result of Emotion Orientated Coping Strategies (EOCS)**

Strategies	Used often (%)	Used somewhat (%)	Not used (%)
Accepted it as fate	<b>63.5</b> (46.5)	<b>22.5</b> (35.6)	<b>14.0</b> (17.9)
Prayed for peace	<b>29.7</b> (57.2)	<b>64.8</b> (32.0)	<b>5.5</b> (10.8)
Pretended wasn't bad	<b>14.6</b> (19.6)	<b>18.8</b> (26.9)	<b>66.6</b> (53.6)
Take it out on others	<b>8.9</b> (10.7)	<b>22.2</b> (17.9)	<b>68.9</b> (71.4)
Used drugs/alcohol	<b>9.2</b> (21.5)	<b>5.4</b> (21.4)	<b>85.3</b> (48.4)
Appease other party	<b>16.4</b> (25.0)	<b>21.8</b> (48.2)	<b>61.8</b> (26.8)

*Source: Survey Data, 2017. Figures in bold characters are for farmers, while those in parentheses are for the herdsmen.*

**Table 6: Descriptive Statistics of Result Social Support- Seeking Coping Strategies (SSSCS)**

Strategies	Used often (%)	Used somewhat (%)	Not used (%)
Help from relatives	<b>60.8</b> (32.2)	<b>14.0</b> (32.0)	<b>25.2</b> (35.8)
Help from local leaders	<b>17.1</b> (7.2)	<b>15.0</b> (7.2)	<b>67.9</b> (85.6)
Sought litigations	<b>13.3</b> (7.0)	<b>7.2</b> (3.6)	<b>79.5</b> (89.2)
Help from local government	<b>7.8</b> (7.2)	<b>16.7</b> (32.1)	<b>75.5</b> (78.5)

*Source: Survey Data, 2017. Figures in bold characters are for farmers, while those in parentheses are for the herdsmen.*

**Socio-economic Variables Influencing the Use of POCS, EOCS and SSSCS**

The ML-(maximum likelihood) binary probit was used to assess the influence of socio-economic variables of the coping strategies by the two groups (Table 7). The average use of POCS among farmers was found to be 72.5%. The result showed that age ( $p < 0.007$ ), income ( $p < 0.018$ ) and family size ( $p < 0.024$ ) were significant factors influencing the use of POCS by farmers. This implies that the use of POCS among farmers increased with these variables. On the other hand, the average POCS use score among the herdsmen was 43.2%. It was found that educational level and annual income were the significant factors influencing the use of problem oriented strategies among the herdsmen. Desire to maximize income could lead to more resort to problem oriented strategies among herdsmen. Educational level showed inverse relationship implying that increasing level of education might encourage less use of POCS among herdsmen.

The average EOCS use score (tiEOCS) among farmer was found to be 44.2%. Age and farm size were found to significantly influence the use of EOCS among farmers. As farm size increased, the use of EOCS also increased implying that increasing farm size requires more commitment from the farmers and he thus become more attached to the farm materially, physically and emotionally. He therefore uses every affordable strategy to combat actual and potential farm-related threats. Age has a negative coefficient implying that increased in age decreased the use of EOCS among the farmers. In other words, aged farmers relied on more realistic coping strategies, other than emotional ones. Similarly, the average EOCS use score among herdsmen was 69.4%. Also, with increasing age, the tendency to use EOCS was found to increase.

The average SSSCS use score among farmers was 68.8% while that of the herdsmen was 21.6%. The use of SSSCS among farmers was found to be influenced by educational level ( $p < 0.05$ ) and farm size ( $p < 0.05$ ). With increasing level of education, farmers perhaps become more aware of social support possibilities, and therefore, adopt SSSCS. Increasing farm size among farmers might also increase their social support seeking

abilities. On the contrary, these variables are not significantly influencing the use of social support seeking strategies among the herdsmen implying that herdsmen generally did not use social support-seeking strategies to cope with conflict.

**Table 7: Results of Probit Estimates of Socio-economic Variables influencing POCS, EOCS and SSCS among Farmers and Herdsmen in the Study Area**

Variables	POCS		EOCS		SSCS	
	Coefficient	p-value	Coefficient	p-value	Coefficient	p-value
Age	0.56 (0.27)	0.007** (0.22)	-0.46 (-0.45)	0.031** (0.103)**	0.33 (0.25)	0.36 (0.82)
Gender	0.09 (0.04)	0.63 (0.48)	0.09 (0.04)	0.45 (0.19)	0.21 (0.02)	0.004 (0.36)
Education	0.008 (-0.021)	0.67 (0.008)**	0.044 (0.032)	0.26 (0.32)	2.7x10 <sup>-6</sup> (0.02)	0.031** (0.21)
Household size	0.32 (0.01)	0.808 (-0.01)	0.20 (0.006)	0.226 (0.23)	0.45 (0.023)	0.62 (0.62)
Annual income	2.3x10 <sup>-6</sup> (0.189)	0.018** (0.021)**	6.2x10 <sup>-7</sup> (2.2x10 <sup>-6</sup> )	0.39 (0.17)	-6.5x10 <sup>-6</sup> (0.006)	0.46 (0.16)
Farm/herd size	6.7x10 <sup>-6</sup> (0.022)	0.024** (0.803)	2.6x10 <sup>-6</sup> (0.053)	0.045** (0.74)	-0.005 (0.044)	0.026** (0.77)
Constant	-0.057 (-0.063)	0.91 (0.83)	-0.059 (-0.55)	0.847 (0.799)	-0.048 (-0.69)	0.921 (0.906)
LR stat.	23.26		20.822		22.624	
Probability	0.014		0.0021		0.0028	
McFadden R <sup>2</sup> (Collective)	0.4362		0.4126		0.4522	

Source: Survey Data, 2017. \*\*Significant at p=0.05

#### IV. Conclusion And Recommendations

Conflict between arable crop farmers and cattle herdsmen over the use of agricultural land is still pervasive in Nigeria, and portends grave consequences for rural development. It has demonstrated great potential to affect various aspects of rural life. The conflicts had far reaching economic, production and socio-psychological effects on the households of most respondents. However, conflict actors affected have used many strategies to cope with the effects of conflict. While farmers generally tended to use problem-oriented strategies, herdsmen basically used emotion-oriented strategies. This might be an indication of a strong emotional attachment to the cattle among the Fulani tribe in Nigeria.

Similarly, the relatively more pronounced use of problem-oriented strategies among the farmers is an indication that they actively sought solutions to the problems arising from the destructions they encountered. The sparse use of social support strategies among both groups suggest there were few avenues for victims of land-use conflict to seek social support.

Several factors were responsible for the use of coping strategies among the two groups. Age, income, farm size and farming/herding experience significantly influenced the use of most of the coping strategies among the respondents. An increase in any of these variables increased respondents` propensity to use, especially, most of the problem-oriented and emotion-oriented coping strategies. The use of emotion-oriented strategies among herdsmen, however, decreased with increasing educational status. Thus, the tendency to be emotionally `attached to the cattle` diminished with increasing years of education among herdsmen. Farmers-herdsmen conflict have persisted for far too long and various strategies adopted by both groups have brought little or no progress in dousing the tide and impacts of the conflicts. It is important for both groups to adopt more realistic coping strategies. Coping strategies should be incorporated into the mainstream activities of farmer-herdsmen conflict management.

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