Land Use Conflict Between Farmers and Herders in Anambra State with Implications for Food Security

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ABSTRACT

Herder-farmer conflicts threaten the livelihood resources of people particularly farming communities due to high dependence on natural resources for survival. The study described the personal characteristics of the respondents; identified the causes of the conflict between the farmers and the nomads; described the perceived socio-economic effects of conflicts and identified the coping strategies adopted by the farmers. Frustration-aggression and conflict theories guided the study. The primary data collected from 120 respondents using well-structured questionnaire were analysed with mean and multiple regression analysis. The findings revealed that women dominated crop farming by 61.67%, mean age was 42.83 with a household size average of 6 persons and mean size farm land of 2.45 hectares. The perceived causes of the conflict were land encroachment, crop damage by cattle, killing of stray cattle, inadequate grazing reserves for the nomads, indiscriminate bush burning and hatred for one another. The perceived socio-economic effects of the conflicts were reduction in cultivable farmlands, little or no seed/cutting for the next planting season, disruption in the transportation of farm produce and destruction of human lives and property. This study also showed that the coping strategies adopted by the farmers were formation of vigilant groups (86.67%), income diversification (85%) and combination of arable farming with other cash crops (71.67) amongst others. The study therefore recommends that the government should address issue of climate change, establish ranches, implement the open grazing ban and provide coping loan for farmers affected by the conflict.

INTRODUCTION

Livestock is the single largest land user and hence the need to study the relationship between indiscriminate grazing and how they affect food production (Food and Agriculture Organization, 2010). Farmer-herder conflict is becoming wide spread and a formidable challenge to agricultural production in Nigeria (Aluko, 2017). In time past, herdsmen and farmers used to have a symbiotic relationship because cattle served as means of transportation for daily goods and manure to fertilize the fields for farmers; the herdsmen in turn obtained grains and other farm produce from farmers (Ojiagu, Okafor and Michael, 2022).

Although conflicts between herders and farmers have been ongoing historically (Mbih 2020), their frequency and intensity are increasing (George, Adelaja, Vaughan and Awokuse. 2022). The recent spike in violence is as a result of the complex interactions between the changing nature of access to land in the region as a result of climate change, a rapidly rising population, the influence of elites on herders, and the undermining of traditional approaches to managing the farmer-herder relationship. However, rising population in the region is also putting pressure on farmers to increase food production. So, the expansion of farming activities invariably led to demand for farmlands and drastically reduced supply of grazing land, encroachment of flocks of cattle frequently on cultivated fields, their relationship is progressively characterized by violent conflicts. In addition to climate-related conflict issues, socio-economic dynamics are exacerbating the conflict.

Anambra has witnessed and still experiencing conflicts of grave proportion which vary in dimension and process between migrant and settler pastoralists and sedentary farmers usually occasioned by cases of rural land disposition, commodification and consequent life and livelihood implications (Kugbega and Aboagye, 2021). Also, Premium Times Nigeria (2021) reported that millions of farm crops were lost in terms of crops destroyed as well as lives lost in Anambra herdsmen and farmers' conflicts. Conflicts reduce food security through their adverse impacts on agricultural labor supply, production decisions (Arias, Ibá˜nez, and Zambrano 2019), and outputs

(George, Adelaja, and Awokuse 2021). Conflicts affect the food accessibility dimension of food security through their harmful impacts on physical and economic access to food (Nnaji, Ma, Ratna, and Renwick, 2022). For the food utilization dimension, the adverse impacts of conflicts are usually captured through anthropometric outcomes (Martin-Shields and Stojetz2019). Finally, for the food stabilization dimension, the adverse effects of conflicts appear to be captured through its impact on variability of food prices and the value of food imports (George, Adelaja, and Weatherspoon 2020).

Conceptual and Theoretical frameworks

Food Security

World Bank (2019) defines food security as a threefold concept. These are food availability, food affordability and food accessibility. Food availability for households means ensuring sufficient food for the households through production. The above definitions, no doubt, point to at least two parts of this complex concept: access to available food and adequate nutrient intake for sustainable health (Udosen, 2021).

Herder

Sanni (2016) sees a herder in Nigeria as any individual who owns a large collection of livestock such as sheep, cows, goats, horses, donkeys, carmel and lots of others. A herder in Nigeria is someone who herds livestock and from the Fulfulde speaking ethnic group (Stevenson, 2016). The definition involves both the owner of the herd of animals and/ or the one that tends the herd whether in free range grazing or intensive system and irrespective of the tribe or ethnic region.

Conflict

Conflict according to Shittu (2020) can be defined as the opposition among social entities directed against one another. It distinguished from competition defined as opposition among social entities independently striving for something of which the supply is inadequate to satisfy all. Therefore, conflict could be well understood if defined on the basis of society, hence a social conflict. Coser (2010) as cited in Ojiagu *et al*. (2022) elaborates the definition of conflict as a struggle over values or claims to status, power, and scarce resources, in which the aims of the conflicting parties are not only to gain the desired values but also to neutralize, injure, or eliminate their rival.

The study is hinged on frustration-aggression and conflict theories:

Frustration-Aggression: This theory was originally conceived by Dollard and Miller (1939) as cited in Myers (2015) but later substantially refined by Berkowitz in 1969. The theory states that aggression is an outcome or result of blocking or frustrating a person's efforts towards a certain goal. The theory further posits that frustration caused by interference in goal-directed activity produces a 'readiness' for aggression which if 'triggered' can result in aggressive response. According to Rationis (2014), the trigger could be an insignificant element of behavior, such as a casual joke, gesture or mild criticism which would normally be overlooked, but to the frustrated individual who is already waiting for an opportunity to show his frustration it may provoke aggressive response or reprisal. In application to this study, the goal or aim of every farmer during planting season is to have bountiful harvest, then sell the farm produce and make profits. On the other hand, the herdsmen would always want to have well fed and healthy cattle and be able to make profits as well. When any of these expectations was not realizable, either by the herd (cattle) eating up and destroying the farmers' crops or that the farmer encroached on grazing reserves or use water reserved for cattle to irrigate their farms, aggression would be triggered. Either of the parties that felt frustrated to achieving their economic goals may decide to reprise as to show their displeasure and as a result, conflict will occur.

Conflict Theory: The lead proponent of this theory is Karl Marx (1818-1883). Marx's conflict ideology is "an analysis of inequality under capitalism and how to change it through confrontation" (Ritzer and Stepnisky, 2014). They argued that in capitalism, there is an inherent conflict of interests between two opposing classes. However, the basic tenet of the theory is that two opposing groups in the society always struggle for limited or scarce resources. Each group struggles to attain or acquire more resources and because they are scarce, struggle ensues between them. Every group tries to protect its own interest, thus blocking the progress of another in accessing that.

MATERIALS AND METHODS

The study was conducted in Anambra State, Nigeria. Anambra is a State in South Eastern Nigeria, created in 1991. It has 21 Local Government Areas (LGAs) which are divided into four Agricultural zones namely Aguata, Anambra, Awka and Onitsha. It lies within latitude 6^0 45^l and 5^0 44^l N and 6^0 36^l and 7^0 20^l E of the area within the Greenwich meridian (Anizoba, Chukwuma, Chukwuma, and Chinwuko (2015). The temperature ranges from 25.5 to 30.5^0C. The State has a population of 4,185,032 persons (N.P.C., 2006). Anambra State is predominantly occupied by the Igbo ethnic group, who by nature are farmers, fishermen, craftsmen and traders. Among the crops produced in the State are; yam, palm produce, rice, maize, cassava, cocoyam, vegetables and different varieties of

fruit trees among others. In Anambra state, the story of farmer-herder crisis is endless. From Ayamelum to Ogbaru and to Ihiala; also, from Orumba to Anambra East and West as well as Awka North, there are incessant farmer-herder crisis. In these cases, destruction of farmlands, raping of women and killing of the locals reverberated.

Multi-stage sampling technique was used for sample selection. In the first stage, ten Local Government Areas (LGAs) where there are cases of farmer-herder crisis were purposively selected from all the agricultural zones of the state; These were Awka North, Awka South, Njikoka, Orumba North, Orumba South, Aguata, Ogbaru, Ihiala, Anambra East and Anambra West, giving 10 LGAs. In the second stage, two communities were purposively selected from the LGAs, due to incessant farmer-nomad conflicts, making a total of 20 communities. In the third stage, two villages were randomly picked from the 20 selected communities, giving 40 villages. The fourth stage involved the random selection of 3 crop farmers from each of the 40 villages, giving a total of 120 farmers. Questionnaire was used for primary data collection and was prepared according to the specific objectives of the study. Data were summarized and analysed using mean, frequency, percentage and multiple regression analysis.

RESULTS AND DISCUSSIONS

Demographic Characteristics of the Respondents

Table 1: Distribution of the farmers according to their personal characteristics

Variables	Frequency	Percentage	Mean
Sex			
Male	46	38.33	
Female	74	61.67	
Age (years)			
Below 20	0	0	
21-30	18	15	
31-40	32	26.67	42.83
41-50	42	35	
51-60	20	16.67	
61 and above	8	6.66	
Marital Status			
Married	80	66.67	
Single	30	25	
Widow/widower	10	8.33	
Level of Education			
No formal Education	9	7.5	
Primary Education	18	15	
Secondary Education	77	64	
Tertiary Education	16	13.33	
Household Size			
1-5	36	30	
6-10	84	70	6
11-15	0	0	
Years of Farming Experience			
0-5	40	33.33	8
6-10	42	35	
11-15	32	26.67	
16-20	6	5	
Farm Size	38	31.76	
0-1.9	74	61.67	2.45
2-3.9	8	6.66	
4-5.9	0	0	
6-7.9			
Conflict Experience			
1-3	36	30	
4-6	80	66.67	5
7-9	4	3.33	
Total	120	100	

Source: Field survey, 2022.

The results for this study showed that most of the farmers are educated married women within the age range of between 41-50 years and mean household size of 6 persons. This implies that the farmers are able to withstand the stress associated with farming and also used more of family than hired labour for food. Farmers with formal education are privileged to have early contact with new innovations and improved technologies which are designed to improve output and productivity, moreover such farmers are early

adopters and risk aversion tendency reduces with formal education. This implies that farmers- herders' conflict is imminent in the area and this justifies the high price of food and food products because farmers could not farm due to fear of having conflicts with the herders. These findings are in line with Emaziye, Emaziye, and Udonadi (2022) who also states that mostly young, married and educated women are engaged in production of food in Delta State, Nigeria. Most have mean had farm size of 2.45 hectares implying that bulk of the farmers were smallholder farmer with farming and conflict experiences of above 16 and 7 years, respectively.

Farmers' Perceived Causes of the Conflict between them and the Nomads

The perceived causes of the conflict between them and the nomadic herders in Anambra State as presented in Table 2 were land encroachment, crop damage by cattle, killing of stray cattle, inadequate grazing reserves for the nomads, indiscriminate bush burning, perceived hatred and climate change. This implies that that farmers would be forced to retaliate when their farms are being destroyed by cattle or stray cattle led by the nomads. The findings corroborate with Ojiagu *et al* (2022) who reports that struggle over grazing land, deliberate grazing of cattle on crops and Climate (weather) change are the causes of farmer-herder conflicts.

Table 2: Distribution of the respondents' perceived causes of conflict

Perceived Cause	Mean	Decision Rule
Land Encroachment	3.58	Agree
Crop damage by cattle	3.35	Agree
Killing of stray cattle	2.80	Agree
Lack of access to water points	2.27	Disagree
Inadequate grazing reserves	3.23	Agree
Pollution of water points	2.30	Disagree
Indiscriminate bush burning	3.42	Agree
Disregard	1.80	Disagree
Land Tenure System	2.25	Disagree
Perceived Hatred	2.62	Agree
Climate Change	2.92	Agree

Source: Field survey, 2022. Decision rule: Agree if mean ≥2.5

Farmers' Perceived Socio-economic Effects of the Conflicts

The farmers' perceived effects of the conflicts between them and the nomadic herders include reduction in cultivable farmlands, lack of access to seed/cutting, disruption in the transportation of farm produce, reduction of hired labour, farm produce is usually stolen, market activities is affected, abandonment of farmland, reduced family labour, lack of information and contact with extension agents, and destruction of human lives, properties and development of the community. The finding is expected as the fear for loss of lives and properties would make the farmers to reduce the number of farmlands they cultivate especially those far from human inhabitation out of fear of being attacked by herders while working in the farm. Reduced farming means there will be lack of seeds/cutting for the next planting season; farmlands are also abandoned leading to theft of the produce. The findings are in conformity with Okeke (2022) reports that the herdsmen and farmers' conflicts adversely affect the socio-economic development in Anambra state by draining of federal and state governments' resources meant for developmental purposes; inhibiting the delivery of public services; discouraging potential foreign and local investors investing in the state/country; affecting rapid economic growth; destructing lives and farmland among others. The farmers perceived effects of the conflicts are presented below in Table 3.

Table 3: Distribution of the respondents' perceived effects of the conflicts

Perceived Effects	Mean	Decision Rule
Reduction in cultivable farmlands	3.33	Agree
Little or no seeds/cuttings	3.35	Agree
Disruption in the transportation of farm produce	3.27	Agree
Reduction of hired labour	3.10	Agree
Farm produce is usually stolen	2.65	Agree
Market activities are affected	3.22	Agree
Abandonment of farmland	3.22	Agree
Reduced family labour	2.83	Agree
Lack of information and contact with extension agents	2.92	Agree
Destruction of human lives, property and development	2.77	Agree

Coping Strategies Adopted by the Farmers

The coping strategies adopted by the farmers were formation of vigilant groups (86.67%), income diversification (85%), combining arable production with other cash crops (71.67%), walking in group to the farm (65%), seeking assistance from the government (61.67%), asking for help from family and friends (41.67%) and securing insurance for farm enterprise (35%). This implies that the farmers did not just fold their hands waiting for government's intervention, rather they resorted to self-help, to ensure they still survive in the midst of crisis.

Table 4: Distribution of the coping strategies adopted by the farmers

S/N	Coping Strategy	Frequency	Percentage	Ranking
1	Vigilant groups are formed	52	86.67	1
2	Walking in groups to the farm	39	65	4
3	Secure insurance for farm enterprise	21	35	7
4	Income diversification	51	85	2
5	Seeking assistance from the government	37	61.67	5
6	Asking for help from family and friends	25	41.67	6
7	Combine arable production with other cash crops	43	71.67	3

Source*:* Field survey, 2022. Multiple Responses Recorded*

CONCLUSION AND RECOMMENDATIONS

The study found that married females who are also young and educated dominated food production with average household size of 6 persons and mean farm size of 2.45 hectares. The perceived causes of the conflict found by this study were land encroachment, crop damage by the cattle, among others. The effects of the conflict were reduction in cultivable farmlands, little or no seed/cutting, among others. This study also shows that coping strategies used by the farmers were mostly formation of vigilant groups and income diversification. The study therefore recommended that the focus of the government and all concerned stakeholders should shift from just ending the conflicts to, rather addressing the root cause and putting sustainable structures in place for a lasting solution guaranteeing food security. Since herders are mostly attracted to small farms in Nigeria establishing a community-wide solution where large farms cooperate with smaller farms would help prevent these conflicts, boost large scale food production and improve food security. Also, the government should address the issue of climate change, establish ranches, enforce the open grazing ban and provide coping loan for farmers affected by the conflict.

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