Effect of Pastoralist-Farmers Conflict on Access to Resources in Savanna Area of Oyo State, Nigeria

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Abstract: This paper examines the effect of pastoralist-farmers conflict on access to resources in savanna area of Oyo state, Nigeria. A snow ball technique was used to obtain a list of agro-pastoralists and their camps in the study area whose conflicts with crop farmers were caused by the nomadic pastoralists' uncontrolled grazing. Fifty percent of the households in each camp were randomly chosen and simple random technique was used to sample male and female household heads. Data was collected through primary source by administering a well-structured interview schedule to the agro-pastoralists. Majority of the agro-pastoralists are married and they are within their active productive age. All male agro-pastoralists made cattle rearing as their primary occupation and their secondary occupations include crop production, goat rearing and sheep rearing, while milk processing and fowl rearing were primary occupation and secondary occupation of female agro-pastoralists respectively. Majority of the agro-pastoralists had no formal education, and not a native of the study area hence adoption of innovation will be difficult. The agro-pastoralists suffered in numerous forms and ways from the conflict ensuing between them and the crop farmers. The aggressiveness of the nomadic pastoralists was the prominent assumed cause of the nomadic pastoralists uncontrolled grazing. The competitive use of various natural resources such as land, water, shelter and air by various rural dwellers is inevitable.
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Introduction

Agriculture plays a leading role in the non-oil sector of Nigeria. It supports 63 percent of the population directly by providing about 28 percent of the gross domestic product (GDP) from the total exports and 70 percent non-oil export production (Oladele and Sakagami 2004). Nigeria as an agrarian country, the production of foods and other raw materials is a necessary ingredient for the take-off of all other sectors of the nation's economy. About 70% of the Nigerian total labour force is employed within the agricultural sector. Ekong 2003 reported 64% of Nigerians live in rural areas and their primary occupation is farming. However most farming households operate land owned through inheritance and acquisition through family ties. More than 50% of farmers own their lands (Okunmadewa, 2002). According to Rahji (2002), "A key feature of the Nigerian Agriculture is the dominance of small holder farms or farm households …they cultivate less than 5 hectares". The small farmers have limited resources therefore they are dependent on traditional implements; hoes and cutlasses, which in turn limit the output; depend on their efficiency in the utilization of basic production resources available , depend on family and hired labour due to the fact that there is extremely low level of mechanization.

Arable crop and cattle producers have not only intensified the use of their respective lands, they have also been exploring other land frontiers for farming and grazing. Farm lands that are normally allowed to fallow for natural rejuvenation of the soil are fast disappearing, while lands that traditionally provide dry season grazing to pastoralists are becoming shorter in supply (Gefu & Kolawole, 2002). This has heightened the frequency and intensity of competition among various land users. The Fulani herdsmen of lower Sahel and Sudan Savannah are now being found in the south (including the forest belt) in search of greener pasture for their herds (Oyesola, 2000; Ajuwon, 2004). Indeed, Ajuwon (2004) reported farmer herdsmen conflict in Imo State, south east of Nigeria. Competition-driven conflicts between arable crop farmers and cattle herdsmen have become common occurrences in many parts of Nigeria (Ingawa, Ega, & Erhabor, 1999). The competition between these two agricultural land user-groups has often times turned into serious overt and covert hostilities and social friction in many parts of Nigeria. In a newspaper study of crises in Nigeria between 1991 and February 2005, Fasona and Omojola (2005) found that land related conflicts accounted for about 51% of the major clashes reported by the selected newspapers. Specifically, conflicts involving agricultural land use between

farmers and herdsmen accounted for 35% of all reported crises. Politico-religious and ethnic clashes occurred at lower frequencies. Another study of 27 communities 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 and as recent as 2005 (Nyong & Fiki, 2005).

Pastoralists may be described as nomadic. Semi-settled (transhumant) or settled (sedentary agro pastoralists) according to the degree of mobility. The semi-settled pastoralists are at times called transhumant agro pastoralist if they also practices cropping (FAO, 1983). Not all pastoralist societies can be accurately described as following a nomadic or transhumance way of life. As conditions change, pastoralists usually adjust. This can result in a traditionally nomadic society or some families within in it becoming more or less transhumance in their migratory patterns if the opportunity arises. Likewise, a society that prefers a transhumance way of life may be forced by circumstances to change to a nomadic pattern for some or all of its livestock (Dennis O'Neil 2007). This makes it difficult for most other rural dwellers to distinguish between the nomadic and the agro-pastoralists. As the livelihoods of pastoralists and agro-pastoralists depend on key resources such as land, water, forests, minerals, wildlife, livestock and pasture, the environment poses particular challenges to their survival. These resources are diminishing from year to year, intensifying competition over resources and causing violent conflict between the pastoralists and other rural land users.

However, most of the crop farmer cannot distinguish between the agro-pastoralist and the nomadic pastoralist's herders but rather referred to agro-pastoralists and nomadic pastoralists as nomads (Ingawa, 2003). Due to the continuous movement pattern of pastoralists, the agro-pastoralists who settled in the area are made mostly to bear the consequences of the uncontrolled grazing and conflicts caused by the nomads. The objectives of this paper were to determine the effect of pastoralist-farmers conflict on access to resources in savanna area of Oyo state, Nigeria.

Materials and Methods

The study area is Iseyin Local Government Area of Oyo State, Nigeria. The area is bounded in the North by Itesiwaju Local Government Area, in the east by Oyo West and Afijio Local Government Areas, in the West by Kajola and Iwajowa Local Government Areas and in the South by Ibarapa North and Ibarapa East Local Government Areas, all in Oyo State. The total population is estimated to be 170,589 (NPC1991). Iseyin Local Government has an estimated land area of 2,952km^2. The climatic conditions of the area include 1125 - 2600mm of mean annual rainfall and a temperature range of 69^0 - 95^{0}f while the relative humidity is high. The vegetation is of the derived guinea savannah type, this is characterized by clumps of deciduous trees reaching between 12-15m and grasses tall (Afolabi, 1977). It has heterogeneous population of Yoruba, Tiv, Agatu, Ibo, Hausa and Fulani (Igbinosa, 1994). The main occupation of majority of the indigenes in the area are farming, trading and weaving. Pastoralism is practiced majorly by the Fulanis and Hausas. Crop farming is ranked highest and this enhanced the designation of the area as the food basket of Oyo State. The agro-pastoralists in Iseyin Local Government Area of Oyo State comprise the population of the study. A snow ball technique was used to obtain a list of agro-pastoralists and their camps in the study area whose conflicts with crop farmers were caused by the nomadic pastoralists' uncontrolled grazing. Fifty percent of the households in each camp were randomly chosen and simple random technique was used to sample male and female household heads. That is one male and one female per household. One hundred and eleven male and female were randomly sampled for the study making a total of two hundred and twenty two respondents.

Data was collected through primary source by administering a well-structured interview schedule to the agro-pastoralists. The instrument for data collection was subjected to pre-existing validation and reliability tests at Oke- Amu and Ipapo in Itesiwaju Local Government Areas. The tests include face validity-to determine the extent to which the instrument measures what was designed to measure, and consistency within the instruments (split half method). The data was analysed by frequency distribution, means and percentage, Chi-square and t-test were used to explore relationship between variables.

Results

The results from the study covered the personal characteristics in Table1, conflicts occurrence and groups involvement in Table 2, access to land before and after conflict in Table 3, restriction to resources after conflict in Table 4 and incidence of relocation after conflict in Table 5. Table 6 presents the Chi-square analysis of relationship between conflict and agropastoralists access to resources while Table 7 covers t-test analysis of difference between male and female agro-pastoralists access to resources.

Table 1: Personal Characteristics of Agro pastoralists

Variables		Frequency	Percent
Gender:	Male	111	50.00
	Female	111	50.00
	Total	222	100.00
Age:	24-30	19	8.56
	31-37	74	33.33
	38-44	73	32.88
	45-51	41	18.47
	52-58	11	4.96
	59 and above	04	1.80
		222	100.00
	Mean Age	39.9	
Education:			
No formal education		216	97.30
Adult Literacy		3	1.35
Koranic School		3	1.35
		222	100.00
Primary Occupation (Male)			
Cattle rearing		111	100.00
Secondary Occupation			
Crop production		111	100
Sheep rearing		43	38.7
Goat rearing		26	23.4
Primary Occupation (Female)			
Milk processing		111	100
Secondary Occupation			
Fowl rearing		111	100
Duration of stay in a community (year)			
1-7`		82	36.94
8-14		106	47.74
15-21		16	7.21
22-28		2	0.90
29-35		16	7.2

Table 2 Conflicts occurrence and groups involvement

Variables	Frequency	Percent
Occurrence of conflict		
Yes	217	97.75
No	5	2.25
	222	100.00
Groups involved in conflict		
Crop farmers and agro-pastoralists	173	77.93
Crop farmers and nomadic pastoralists	43	19.37
Agropastoralists and nomadic pastoralists	3	1.35
Agropastoralists and agro-pastoralists	2	0.90
Crop farmers and crop farmers	1	0.45

Table 3: Access to land before and after conflict

	Before the conflict		After the conflict	
Area of land acquire	Frequency	Percent	Frequency	Percent
16-20	3	2. 70	03	2. 70
11-15	4	3. 61	04	3. 61
6-10	36	32.43	27	24. 32
1-5	68	61.26	77	69.37

Table 4: Restriction to resources after conflict

Restriction to resources after conflict	Frequently	Rarely	Never
Restriction to land	11(5.0)	22(9.9)	189(85.1)
Restriction to water	20(9.0)	96(43.2)	106(47.7)
Restriction to fodder crops	11(5.0)	36(43.3)	175(78.8)
Restriction to shelter	10(4. 5)	22(9.9)	190(85.6)

Table 5. Incidence of relocation after conflict

Variable	Frequency	Percent
Occurrence of re- location		
Yes	5	2.3
No	217	97.7
Total	222	100.00

Table 6 Chi-square analysis of relationship between conflict and agropastoralists access to resources

Variable	Access to resources
Chi-square (X^2) value	0.002
df	1
P	0.961
Decision	Not significant

Table 7 t-test analysis of difference between male and female agro-pastoralists access to resources

Variable	N	Mean	Standard Deviation	t-value	P	Decision
Male	111	18.595	1.598	10.248	.000	S
Female	111	17.027	17.027			

Discussion

As stated in Table 1, about fifty percent of the respondents were male while the remaining was female. This agrees with Quisumbing (1994) and Gladwin (1996) that when individual characteristics, other than sex, and input levels are controlled, male and female farmers are equally efficient farm managers. Similarly, it agrees with Ibrahim (1998) that agro-pastoralists migrate from one place to another with their wives and children. The mean age of the agro-pastoralists is 39.9 years. About sixty six percent of the agro-pastoralists were between the age of 31and 44. This age bracket, as asserted by Oladele (1998) is highly ambitious and can engage in more than one livelihood activities. One hundred percent of the respondents were married. This suggests that the agro-pastoralists marry early (on or before the age of 24). This is in agreement with Oladele (1998) that marriage provides additional farm labour for the farmers.

Majority (97.30%) of the agro-pastoralists have no formal education. This justifies the inclusion of nomadic education in the National Policy of Education to take care of majority of the pastoralists that do not have the advantage of formal education (National Policy on Education, 1998). The primary occupation of the male agro-pastoralists is predominantly cattle rearing. The secondary occupations of the agro-pastoralists are crop production (100%), Sheep rearing (38.7%) and goat rearing (23.4%). This agrees with Dylan et al (1998) assertion that herders pursue a complex range of conflict avoidance strategies to minimize vulnerability and to avoid confrontations with other resource users by diversification of livelihood strategies. This sheep-goat rearing ratio (2: 1) is contrary to rearing ratio of (3: 5) in Kastina State (Hamisu, 1999). The primary occupation and secondary occupation of female agro-pastoralists are milk processing and fowl rearing respectively. This agrees with Sean (2003) that the pastoralists have a high degree of gender and age stratification. He added that female agro-pastoralists role is confined to the home. The mean length (duration) of stay (year) in the community is 8.75. The mode (47.74%) of the duration year bracket is 8-14 years. This agrees with Roger and Ingawa (2003) that agro-pastoralists considerably live longer in, and more committed to their communities unlike the mobile people (nomads) who simply are not committed to committees.

Table 2 shows that about 98% of the agro-pastoralists indicated the incidence of conflicts between crop farmers or nomadic pastoralists in their respective communities. This agrees with Ogunsanya and Popoola (1999) that nomadic pastoralists uncontrolled grazing is rampant in Iseyin Local Government Area. Majority (77.93%) of the conflicts were between the crop farmers and agro-pastoralists, followed by crop farmers

and nomadic pastoralists (19%), agro-pastoralists and nomadic pastoralists (1.35%), agro-pastoralists and agro-pastoralists (0.90%) and crop farmers and crop farmers (0.45%). The multiple resource systems common to dry land areas are characterized by the utilization of natural resources for multiple purposes or by more than one user (Cousins, 1996). Because groups have different objectives and interests in the use of resources, competition are often accentuated through violent conflict is not necessarily inevitable (Sean 2003). Hussein (1996) added that local-level conflicts over natural resources are endemic in Africa's pastoral and agro-pastoral system. However, Daniel and Gerett (1999) were of the opinion that misunderstanding or confusion regarding rights to natural resources and management responsibility can escalate into more intense conflicts as the number of people involved and the problems multiply.

As stated in the table 3, majority (93.69%) of the agro-pastoralists acquired less than eleven acres of land for crop production before and after the conflict. However, the occurrence of the conflicts brought about a reduction of eight percent in 6-10 acre bracket after the conflict. Agro-pastoralists do blame nomads for damaging crops overnight and flee immediately after which discourages the expansion of crop cultivation (Umar, 2003). Restriction to water resources (9.0%) was more suffered for by agro-pastoralists. Than land (5.0%), fodder crops (5.0%) and shelter (4.5%). The effects of the conflict between the Agropastoralists and crop farmers or nomadic pastoralists were not severe and could not lead to re- location as about ninety eight percent of the Agropastoralists stated that they did not re- locate as a result of the conflict.(table 4). This suggests that the crop farmers still accommodate the Agropastoralists after the conflict. However, the crop farmers believed the agropastoralists do not move about and hence do not destroy farm crops with their animals hence no need to drive them away from then camps (Umar, 2003).

Table 6 shows the relationship between the nomadic pastoralists uncontrolled grazing which led to conflict and Agropastoralists access to resources. It has a chi-square value of $X^2 = .002$, $P > 0.05$. This implies that there is no significant relationship between occurrence of conflict and access to resources such as water, land, shelter and fodder crops. The non-significant relationship between the conflict and the accessibility of agro-pastoralists to resources might be justified by the fact that aggression plays a large part in the lives of pastoralists. Their unhindered accessibility to resources might be due to their military prowess (Sean 2003). Similarly, the pastoralists believe in the principle of the "commons" – that nobody owns any of the common property resources such as water, air, land and plants as stated by Bala and Ajuwon (2004), this may make them to strongly restrict any attempt to hinder their accessibility to any of the resources. Table 7 reveals that there is significant difference in male and female access to resources. It has a mean = 2.901 and .7387, standard deviation 2.945 and .912, t-value = 7.390, $P < 0.05$ respectively. The significant difference in the accessibility of male and female to resources may be due to the difference in male and female livelihood activities. The major resource that may be jointly demanded for is water, yet the rate of demand may be inversely related.

CONCLUSION

The study identified personal characteristics, livelihood activities and accessibility to resources of the agro-pastoralists in Iseyin Local Government Area of Oyo State. The study showed that the agro-pastoralists move about and live together with their household. Majority of the agro-pastoralists are married and they are within their active productive age. All male agro-pastoralists made cattle rearing as their primary occupation and their secondary occupations include crop production, goat rearing and sheep rearing, while milk processing and fowl rearing were primary occupation and secondary occupation of female agro-pastoralists respectively. Majority of the agro-pastoralists had no formal education, and not a native of the study area hence adoption of innovation will be difficult. The agro-pastoralists suffered in numerous forms and ways from the conflict ensuing between them and the crop farmers. The aggressiveness of the nomadic pastoralists was the prominent assumed cause of the nomadic pastoralists uncontrolled grazing.

The competitive use of various natural resources such as land, water, shelter and air by various rural dwellers is inevitable. The study identified that the occurrence of conflict did not significantly hinder the agro-pastoralists access to resources.

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