

PERCEIVED EFFECTS OF FARMERS-HERDERS' CONFLICTS ON ARABLE CROP FARMERS' PRODUCTION IN OSUN STATE, NIGERIA

¹ALAO, O. T., ¹IBITUNDE, I. O. AND ¹ISOLA, O. S.

¹Department of Agricultural Extension and Rural Development, Osun State University, Osogbo, Osun State, Nigeria
Corresponding author: ibidun.ibitunde@uniosun.edu.ng, +2348069412142

ABSTRACT

The study examined the perceived effects of herdsmen-farmers' conflicts on arable crop farmers' production in Osun State, Nigeria. It specifically described the socio-economic characteristics of arable crop farmers, identified the perceived causes of herdsmen-farmers' conflicts, and examined the perceived effects of herdsmen-farmers' conflicts. A multi-stage sampling procedure was used to select 270 arable crop farmers for the study. A well-structured interview schedule was used to collect data from the arable crop farmers. Data collected were analyzed using frequency counts, percentages, mean, standard deviation, and weighted mean scores. The results reveal that the mean age of the arable crop farmers was 51–8.2 years majority, (80.7%) of the arable crop farmers were males, a majority (88.5%) were married, the mean household size was 8 – 3 persons and almost all (99.3%) had no insurance for their farm crops. Perceived causes of herdsmenfarmers conflicts were negligence of underage children in managing cattle ($\bar{x} = 2.65$) and disregard for traditional authority by herders ($\bar{x} = 2.57$). Perceived effects of herdsmen-farmers conflicts were a reduction in the income of farmers ($\bar{x} = 2.72$) and a reduction in farm yield ($\bar{x} = 2.66$). The study concluded that herdsmen-farmers' conflicts have negative effects on the arable crop farmers' production; such effects as a reduction in the income of farmers and a reduction in farm yield. The study recommended that government and stakeholders should lessen the perceived effects of herders-farmers conflicts so as to enhance food security in the state and in the country at large.

Keywords: *Perceived causes, perceived effects, arable, crop, farmers, herdsmen, conflicts.*

INTRODUCTION

Activities of herdsmen who rear animals are characterized by moving from one place to another focusing on green pastures to graze their herds. The major cattle breeders in Nigeria are Fulani herdsmen who rear the cattle for meat and milk. The Fulani in Nigeria owns over 90% of the nation's livestock population, which accounts for onethird of the agricultural gross domestic product (GDP) and 3.2% of the nation's GDP (Ndubuisi, 2018). An increase in the cows' population gives rise to an increased pressure on natural resources which as a result gives rise to a large number of herds and herders migrating into different parts of the country

thereby competing with different farmers for the farmland as well as crops amongst others (Shittu, 2020).

Worldwide, arable crops play significant roles in the socio-economic lives of rural and urban dwellers in terms of food consumption and sources of income (Ajibefun, 2017). In Nigeria, agricultural activities are characterized by the production of essential arable crops such as maize, rice, sorghum, millet, cassava, cowpea, wheat, soybeans, melon, groundnut, yam, and vegetables. Almost all farmers in the country cultivate one or more arable crops at the subsistence level for income generation and to meet food requirements. Rural communities engage in

arable crops production as a means of livelihood and economic sustenance (Adepoju, *et al.*, 2018).

In recent times, there has been an increase in the cases of conflicts in Nigeria that are linked to the farmer-herder conflicts characterized by attacks on farmers and unarmed innocent rural dwellers across the country claiming thousands of lives and damaging properties. The attack most of the time caught farmers and rural dwellers unaware. They are overpowered and injured, and the herders take undue advantage to steal, rape, kidnap, and raze houses (Abanyam, *et al.*, 2020).

Hence this study examined the perceived effects of herdsmen-farmers' conflicts on the arable crop farmers' production in Osun State, Nigeria.

Objectives of the study:

The main objective of the study was to examine the perceived effects of herdsmen-farmers' conflicts on the arable crop farmers' production in Osun State. The specific objectives were to:

- i. describe the socio-economic characteristics of the arable crop farmers;
- ii. identify the perceived causes of herdsmen-farmers' conflicts;
- iii. examine the perceived effects of herdsmen-farmers' conflicts on the arable crop farmers' production.

MATERIALS AND METHODS

The study area was Osun State. Osun State was created on Tuesday, 27th August 1991, from the old Oyo State. It is bounded in the north by Kwara State and partly by Ekiti State and Ondo State in the east, in the south by Ogun State and in the west by Oyo State. It has an area of approximately 9,026 square kilometres and a population of 3,416,959

(1,734,149 males and 1,682,810 females) (National Bureau of Statistics, 2011).

The population of the study included the arable crop farmers in Osun State, Nigeria whose farms were destroyed by herdsmen in recent times. A multistage sampling procedure was used to select respondents for the study. There are three agricultural zones in the State namely: Osogbo, Iwo, and Ife/Ijesa zones. The first stage involved a purposive selection of three (3) Local Government Areas (LGAs) where herdsmen and arable crop farmers' conflicts were prevalent from each of the three agricultural zones, making nine LGAs. The second stage involved the purposive selection of two communities from each selected LGA where herdsmen and arable crop farmers' conflicts were prevalent, translating to 18 communities. The third stage involved the use of the snowball technique to select fifteen arable crop farmers whose farms were destroyed by herdsmen in recent times from each of the farming communities making a total number of two hundred and seventy arable crop farmers.

Data were collected with the use of a wellstructured interview schedule. Simple descriptive statistical techniques such as frequency counts, percentages, mean, standard deviation and weighted mean scores were used to analyze the data collected.

Measurement of variables

The dependent variable of the study was perceived effects of herdsmen-farmers' conflicts on arable crop farmers' production. A list of eleven (11) possible effects of herdsmen-farmers' conflicts were presented and the arable crop farmers were asked to rate on a three-point Likert-type rating scale. The response options provided were "to a large extent" (03), "to a lesser extent" (02) and "not

at all" (01). Mean and standard deviation were obtained for each of the perceived effects and used to rank the perceived effects in descending order. From the scales of measurement of 1, 2 and 3 of "not at all", "to a lesser extent" and "to a large extent" respectively, indicators of perceived effects of herders-farmers' conflicts whose means measure up to 2 (that is $1+2+3/3$) were used as a benchmark for the perceived effects. In addition, a list of sixteen (16) possible causes of herders-farmers' conflicts were presented and the arable crop farmers were asked to rate on a three-point Likert-type rating scale. The response options provided were "to a large extent" (03), "to a lesser extent" (02) and "not at all" (01). Mean and standard deviation were obtained for each of the perceived causes and used to rank the perceived causes in descending order. From the scales of measurement of 1, 2 and 3 of "not at all", "to a lesser extent" and "to a large extent" respectively, indicators of perceived causes of herders-farmers' conflicts whose means measure up to 2 (that is $1+2+3/3$) were used as a benchmark for the perceived causes.

RESULTS AND DISCUSSION

Socio-economic characteristics of arable crop farmers.

Results in Table 1 reveal that the mean age of the arable crop farmers was 51 years with a standard deviation of 8.2. This shows that the farmers were still in their active and productive years. Consequently, they may respond violently to conflict or aggression from herdsmen due to youthful exuberance. This finding agrees with Ukamaka, *et al.*, (2017) that average age of crop farmers in Kogi State, Nigeria was about 51 years. In addition, the results reveal that majority (80.7%) of the arable crop farmers were males. Because of their energy and assertiveness, males typically have a higher

likelihood of involvement in conflicts compared to females. As a result, they are often seen as the defenders of rural communities. This finding agrees with Ibitunde, *et al.*, (2021) that the majority of arable crop farmers in Odo-Otin Local Government Area of Osun State, Nigeria were male. Also, the results reveal that majority (88.5%) of the arable crop farmers were married. This implies that there were more married arable crops farmers among the respondents, the responsibilities they carried might be the reason why some of them were into the arable crops farming. This result supports the finding of Ibitunde, *et al.*, (2019) that the majority of farmers in Southwest Nigeria were married. The results further show that the mean household size was 8 persons with a standard deviation of 3 persons. The finding indicates that the arable crop farmers in the study areas had large household sizes, which could assist in farming activities to reduce the cost of production.

Also, the results show that all (100%) of the arable crop farmers had farm sizes between 1-5 hectares. This finding indicates that all the arable crop farmers were small scale farmers. This result supports Obasi *et al.*, (2013) that majority of the arable crop farmers in Imo State, Nigeria were small scale farmers. Moreover, the results reveal that almost all (99.3%) of the arable crop farmers in the study area had no insurance for their farm crops. While very few (0.7%) of the arable crop farmers insured their farm crops. Non engagement of the farmers in insurance may lead to total loss of investment as a result of herdsmen crop destruction. However, the farmers' engagement in insurance can help to lessen the effects of conflicts. This result is in tandem with Obaniyi *et al.*, (2020) findings

that very insignificant arable crop farmers engaged in an insurance policy.

the mature sense of reasoning to properly tend and coordinate the cattle with minimal risk in

Table 1: Distribution of arable crop farmers according to their socio-economic characteristics (n = 270)

Variables	Frequency	Percentage	Mean	Standard deviation
Age in years				
30-45 years	73	27.0		
46-60 years	164	60.8		
61-75 years	33	12.2	51.0	8.2
Sex				
Male	218	80.7		
Female	52	19.3		
Marital status				
Married	239	88.5		
Separated	7	2.6		
Divorced	1	0.4		
Widowed	13	4.8		
Widower	10	3.7		
Household size				
1-5 members	50	18.5		
6-10 members	184	68.2		
11 and above members	36	13.3	8	3
Farm size (ha)				
≤ 5	270	100		
6-10	0	0.0		
≥ 11	0	0.0	2.1	0.7
Possession of farm crops insurance				
Have insurance	2	0.7		
Have no insurance	268	99.3		

Source: Field survey, 2021

Perceived causes of herders-farmers' conflicts

Results in Table 2 show that negligence of underage children in managing cattle (\bar{x} =2.65) ranked 1st. Underage and child herding can be a source of farmers-herders' conflict. Young and underage children lack

crossing highways and public places. In addition, use of child-herder keeps farmlands vulnerable to trespass as most of the children may find it difficult controlling the cattle or be carried away by events during grazing. This finding agrees with Tari (2021) that one of the issues and perceptions of farmers/herders conflicts in Central Nigeria is underage and child herding.

The results further show that disregard for traditional authority by the herders ($\bar{x} = 2.57$) ranked 2nd. This is congruent with the finding of Ogebe, *et al.*, (2019) that most causes of herdsmen’s attacks were the disregard for host traditional authorities.

In addition, damage to growing crops ($\bar{x} = 2.54$) ranked 3rd. Damage to growing crops will definitely reduce the yield of the crop and hence the income of farmer and this may result to conflict. This was supported by Oghuvbu (2021) that the most prevalent perceived cause of the crisis was the destruction of the crops and agricultural products. Stealing of crops ($\bar{x} = 2.47$) ranked

led to the destruction of farm crops ($\bar{x} = 2.31$) ranked 6th and others in that order.

This means that out of the sixteen perceived causes, nine were examined as major

perceived causes of herders-farmers’ conflicts; these were negligence of underage children in managing cattle, disregard for traditional authority by the herders, damage to growing crops, stealing of crops and stealing of farm produce/products. Others were indiscriminate bush burning leading to the destruction of farm crops, total invasion of farms, burning of farm crops by the heat of cattle’s defecation and pollution of water

Table 2: Distribution of arable crop farmers based on perceived causes of conflicts (n=270)

Perceived causes of conflicts	Mean	SD	Rank	Remark
Negligence of underage children in managing cattle	2.65	0.621	1 st	Major cause
Disregard for traditional authority by the herders	2.57	0.657	2 nd	Major cause
Damage to growing crops	2.54	0.594	3 rd	Major cause
Stealing of crops	2.47	0.666	4 th	Major cause
Stealing farm produce/products	2.41	0.689	5 th	Major cause
Indiscriminate bush burning leads to the destruction of farm crops	2.31	0.736	6 th	Major cause
Total invasion of farms	2.14	0.889	7 th	Major cause
Burning of farm crops by the heat of cattle’s defecation	2.07	0.768	8 th	Major cause
Pollution of water points	1.95	0.722	9 th	Major cause
Blockage of flowing water	1.91	0.753	10 th	Minor cause
Encroachment and overgrazing of fallow land	1.88	0.708	11 th	Minor cause
Land degradation	1.73	0.704	12 th	Minor cause
Compaction of soil due to overgrazing	1.73	0.678	13 th	Minor cause
Killing and maiming of farmers	1.54	0.676	14 th	Minor cause
Sexual harassment of women on the farm	1.49	0.632	15 th	Minor cause
The kidnapping of farmers on their farms	1.48	0.644	16 th	Minor cause

4th, this was supported by Alao, *et al.*, (2019) that one of the major causes of herdsmenfarmers’ conflicts was crop theft. Stealing of farm produce/products ($\bar{x} = 2.41$) ranked 5th and indiscriminate bush burning

points. These results further infer that any intervention that would be applied to prevent herders-farmers conflicts in the study area should be applied to enhance the prevention of all the perceived causes in ascending order.

Source: Field survey, 2021

Perceived effects of conflicts between arable crop farmers and herdsmen. Results in Table 3 show the perceived effects of the conflicts between herdsmen and arable crop farmers in descending order; reduction in income of farmers (\bar{x} =2.72) and reduction in farm output or yield (\bar{x} =2.66), this is in tandem with Oghuvbu (2021) and Ogebe *et al.*, (2019) that reduction in income/farm output or yield of farmers mostly ranked first as a major perceived effect of conflicts between herdsmen and arable crop farmers. Others were anger/anxiety/emotional

the arable crop farmers as a result of herdsmen’s attacks may have serious negative effects on farmers’ savings, credit repayment, quantity of arable crops supply to urban dwellers, as well as food security of a nation.

This means that out of the eleven perceived effects, eight were examined as major perceived effects of herders-farmers’ conflicts; these were reduction in income of farmers, reduction in farm output or yield, anger/anxiety/emotional exhaustion,

Table 3: Distribution of the respondents based on perceived effects of conflicts (n=270)

Perceived effects of conflicts	Mean	SD	Rank
Reduction of income of farmers	2.72	0.482	1 st
Reduction in farm output or yield	2.66	0.520	2 nd
Anger/anxiety/emotional exhaustion	2.59	0.655	3 rd
Total destruction of crops	2.37	0.745	4 th
Sleepless night	2.11	0.858	5 th
Partial destruction of crops	2.07	0.777	6 th
Soil erosion due to overgrazing	2.01	0.724	7 th
Arms proliferation	1.96	0.796	8 th
Displacement of farmers from their farms and settlement	1.76	0.715	9 th
Loss of properties due to conflict	1.65	0.638	10 th
Loss of produce in storage	1.55	0.624	11 th

exhaustion (\bar{x} =2.59), destruction of crops (\bar{x} =2.37), sleepless night (\bar{x} =2.11), partial destruction of crops (\bar{x} =2.07), and soil erosion due to overgrazing (\bar{x} =2.01) and others in that order.

destruction of crops, sleepless night, partial destruction of crops, soil erosion due to overgrazing, and arms proliferation. These results further infer that any intervention that would be applied to lessen the perceived effects of herdsmen-farmers conflicts should be applied in ascending order.

The finding of this study further shows that a decrease/reduction in income on the part of **Source:** Field survey, 2021.

authority by herders. However, the conflicts have negative effects on arable crop farmers’ production, such as a reduction in farmers’ income and farm yield, among others. The study, therefore, recommends that the government at the Federal, State, and Local levels, along with all other stakeholders, work

CONCLUSION AND RECOMMENDATIONS

In conclusion, the study revealed that farmers-herders conflicts stem from the negligence of underage children managing cattle and the disregard for traditional

hand in hand to mitigate the effects of herders-farmers conflicts on arable crop production to enhance food security in the State and the country at large.

REFERENCES

- Abanyam, N. L., Aver, T. T. and Gwambeka, E. J. (2020). The impact of cattle herders and crop farmers conflicts on socio-economic development in Nigeria. *International Journal of Management, Social Sciences, Peace and Conflict Studies*, 3(3): 203-216.
- Adepoju, A. A., Oladeebo, J. O. and Sanusi, W. A. (2018) Effect of Fulani Invasion on Household Poverty Status among Arable Crop Farmers in Southwestern, Nigeria. *International Journal of Research in Agricultural Sciences*, 5(4): 2348 – 3997.
- Ajibefun, M. B. (2017). Social and economic effects of the menace of Fulani herdsman crises in Nigeria. *Journal of Educational and Social Research*, 8(2): 133-139.
- Alao O. T, Ayinde J. O, Ogunjinmi S. I and Adebisi A. A (2019). Perception of arable crop farmers on the causes and effects of farmers-herders conflicts in Ede, Osun state, Nigeria. *UNIOSUN Journal of Agriculture and Renewable Resources (UJARR)*, 3(1): 30-40.
- Ibitunde, I. O., Alao, O. T. and Akinwale, S. E. (2021). Determinants of Credit Accessibility by Arable Crop Farmers in Odo-Otin Local Government Area of Osun State, Nigeria. *Scientific Papers Series "Management, Economic Engineering in Agriculture and Rural Development"*, 21(3): 449-456.
- Ibitunde, I. O., Adereti, F. O., and Farinde, A. J. (2019). Inputs accessibility and effectiveness of growth enhancement support scheme (GESS) in southwest Nigeria. *Scientific Papers Series Management, Economic Engineering in Agriculture and Rural Development*, 19(3): 281-289.
- National Bureau of Statistics, Annual Abstract of Statistics (2011). Federal Republic of Nigeria. pp 18
- Ndubuisi, C. I. (2018). A critical analysis of conflicts between herdsman and farmers in Nigeria: Causes and socioreligious and political effects on national development. *HTS Teologiese Studies/Theological Studies*, 74(1): 1-6.
- Obaniyi K. S, Kolawole A. E, Ajala A. O, Owolabi A. O, Akangbe J. A. (2020). Assessment of crop farmers' coping strategies to pastoralism/nomad activities in Nigeria. *Open Agriculture*, 5: 219–226.
- Obasi, P. C., Henri-Ukoha, A., Ukwueke, I. S., & Chidiebere-Mark, N. M. (2013). Factors affecting agricultural productivity among arable crop farmers in Imo State, Nigeria. *American journal of experimental agriculture*, 3(2): 443-454.
- Ogebe, F. O, Daniel Abah and Ligom, L. S. (2019). Land Use Conflict between

- Farmers and Herdsmen in Gwer West Local Government Area of Benue State, Nigeria. *Journal of Agriculture and Veterinary Science (IOSR-JAVS)*, 12(1): 23-31.
- Oghuvbu E. A (2021). A Study of the Causes and Effects of herders-farmers Crisis in Agadama, Delta State, Nigeria. *EBSU Journal of Social Sciences and Humanities*, 11(1): 28-40.
- Shittu, M. O. (2020). Farmers and Herders Conflict in South-West Nigeria. From 2011 – 20219; *Unpublished M.Sc. Thesis. Department of Peace Studies and Conflict Resolution, Faculty of Social Science. National Open University of Nigeria (NOUN).*
- Ukamaka, D. M., Danjuma, S. E., Mbolle, C. J., Achonam, E. I., & Mbadiwe, I. E. (2017). Livelihood issues in herdsmen-farmers conflict among farming communities in Kogi State, Nigeria. *African Journal of Agricultural Research*, 12(24): 21052115.
- Tari, V. A. (2021). Issues and Perceptions of Farmers/Herders Conflicts in Central Nigeria. *Journal of History and Social Sciences*, 12(1), 18-2