

The Effects of Migration and Conflicts between Herders and Farmers on Milk Production in Southwestern Nigeria

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Abstract

One of the perennial issues in Nigeria's Agricultural sector is the tension between Nigeria's pastoralist herders and the settled indigenous farmers. These tensions have intensified in the country in recent years, particularly with the heightened insecurity in Northern Nigeria, dwindling natural resources, and unavailability of enough grazing land; all contribute to the migration of the herders from the Northern part of Nigeria to other parts of the country. Thus, with a focus on the effects of migration and the herders-farmers clashes on milk production, our team interacted with farmers and herders in selected communities in South-western Nigeria in Ondo, Osun, and Oyo States. The methodology for data gathering included- descriptive research, field survey, qualitative interviewing, and the use of relevant journal articles. The major findings indicated that the herders migrate primarily for cattle grazing, sometimes this grazing encroach on farmlands, and causes the conflicts with farmers. The major effects on the cattle include low dairy production due to stress, soft tissue injuries, attacks from reptiles and farmers, cow disease and sometimes, death of weak cattle. This study recommends the need for nomadic education, ranching of cattle, cattle health policies, and adequate cattle grazing systems as obtainable in civilised societies.

Keywords: migration, herders, farmers, conflicts, southwest, religio-ethnic, milk, southwest.

Introduction

One of the perennial practices by nomadic herdsman in Nigeria is migrating with their cattle for grazing. As Nduibusi (2018) rightly noted, this group of herdsman move their animals generally in the southwards direction largely during the dry season and return back during the rains. As a result of these migrations for grazing, conflicts occur between the herdsman and the indigenous farmers on whose farmlands these nomadic herdsman graze their cattle. Within the last decade or more, there have been heightened tensions between the herdsman and the farmers in many parts of Nigeria. Nduibusi (2018) described the rate of these conflicts in Nigeria as alarming.

Related to the tension of herder's migrations, is the issue of religio-ethnic conflicts between herders and indigenous farmers in Nigeria. As Chioma (2022) rightly noted; since independence, Nigeria has been battling with the problem of ethnic, and religio-ethnic divides. Unfortunately, the herders-farmers clashes in many contexts, have also taken the pattern of religio-ethnic dichotomy and thus creating conflicts. In many parts of Nigeria, most, but not all of herdsman-farmers conflicts involve Fulani herdsman and non-Muslim, non-Fulani, mostly Christian crop farmers (Otesile 2018).

Within the last decade in Nigeria, the violent clashes between nomadic herders and farmers have escalated beyond imagination with each new day recording clashes leading to the loss of lives and properties (Ajibefun, 2018; Mawoli, et. al., 2020). A dimension of terrorism appears to have been added to pastoralism (Johnson et. al., 2017). Regrettably, these clashes continue to have inimical impacts on the socio-economic, political, and psychological lives of the communities where the clashes occur (Adekunle et al., 2010; Idowu, 2017; Njoku, 2018). However, it appears that not much scholarly attention has been given to the effects the migration of herders and the repeated conflicts between them and the farmers have on milk production by the cattle. Therefore, the present investigation gives attention to the effects of constant migration by herders, and herders-farmers clashes on milk production by cows in South-western Nigeria. In realising this objective, the major issues the paper discusses include- A brief history of herders' migration in Nigeria; causes of herders' migration in Nigeria; Cow milk production in South-western Nigeria; Effects of migration on cattle health and milk production; Effects of Farmers-herders conflicts on Milk production in South western Nigeria; and, the panacea to the problems of herders' migration and farmers-herders clashes.

Methodology

The research was carried out through multi-stage sampling methods through primary and secondary information that was gathered. First is the Descriptive Research Design, this method entails among other things observations and interviews with the farmers and herders. Open-ended interview questions were structured to elicit information from the farmers and herders using the snowball technique. The team visited parts of Ondo, Osun, and Oyo States of Nigeria to interact with herdsmen and indigenous farmers on the repeated conflicts between the two groups. In addition, the team also visited one of the milk collection centers in Ede, Osun state, and interacted with the staff of the center. Second, the study employed scholarly academic works from reputable journals on milk production. And third, the Internet also proved very helpful in information gathering to augment the discussions.

A brief history of herders' migration in southwest Nigeria

The history of herders' migration into Southwestern Nigeria cannot be divorced from the history of Fulani migration into Nigeria. The Fulani as an ethnic group migrated into other parts of West Africa as an ethnic stock from the Futa Djallon area around Senegambia. They are divided into four groups not in particular hierarchical forms. There were those who formed the emirates of the ruling dynasties during the Holy war of 1804-1830 in Northern Nigeria, the sedentary Fulani who are involved in occupations, ranging from judges, farmers, and entrepreneurs among others, the semi-sedentary Fulani who are majorly farmers and as well as cattle rearers, while the last category are those whose social organisations are dominantly characterised by livestock raising. This last group has been technically named "*Bororo Fulani*".

In Yorubaland, the history of migration of the Fulani can be traced to the revolution of Afonja, the Aare Ona-Kakanfo in Ilorin when he invited Alimi, the Fulani Moslem priest to Ilorin to act as his priest (Johnson, 1921). By this singular act, all the Hausa and Fulani slaves in the adjacent towns hitherto living and employed as barbers, rope-makers and cowherds deserted their masters and flocked to Ilorin under the standard of Afonja, the Kakanfo and were henceforth protected by him against their masters (Johnson, 1921). This marked the beginning of Fulani migration into Yorubaland and by extension the movement of herders into Yorubaland. Ultimately, Afonja fell out with these Fulani elements and was murdered by them. After the demise of Afonja in 1824, Ilorin and its surrounding areas which were on the northern fringe of the Oyo Empire were systematically captured by the Fulani and Ilorin thereby becoming a base of aggression where the Jihadists attempted to penetrate, conquer, and Islamise Yorubaland (Law, 1977).

After successfully taking over Ilorin, the Fulani who had as their ambition the decision to dip the Koran into the Atlantic Ocean was not satisfied with their triumph and therefore desired to extend their rule into the heart of Yorubaland to annex the whole of coastal cities of Yorubaland into Sokoto Caliphate. Under the rulership of Ali, the Hausa Balogun of Ilorin, c.1840, the Fulani laid siege on Osogbo (Olomola, 1998). It should be understood that the main motive of the Fulani was to annihilate the Oyo monarchy and civilization before venturing into all other Yoruba kingdoms for total subjugation. The movement of the Fulani into other parts of Yorubaland was halted at the battle of Osogbo by Ibadan, after which Ibadan asserted her prominence as a powerful state and subsequently her hegemony over other Yoruba states. This singular effort by the Ibadan temporarily halted the movement of the Fulani into Yorubaland albeit for a short period. By the 1950s, the Fulani herders started their journey into Yorubaland again, beginning from Ibarapaland. Their movement into Ibarapa was influenced by several factors among which are the availability of lush green vegetation suitable for livestock feeding, a stable and secure environment, limited menace of parasitic diseases in Ibarapaland. Also, the migration was further strengthened by the accommodating spirit of the Yoruba element in Ibarapaland as well as the enactment of the Grazing Reserve Law of the federal government.

Conceptual Clarifications

Migration

The movement of people from one place to the other either for temporal or permanent residence. The causes range from fleeing from life-threatening situations such as war and famine to searching for a better life.

Herder

A person who cares for a group of livestock ranging from cattle, goats, pigs, and sheep (Udo et. al., 2022). Herders are those whose major task is in the rearing of animals like cows, goats, and sheep. In the Nigerian context, the people group that are recognized with this trade are the Fulani. Whose origin according to Adediran (1985) is not definite, however, he traced their origin to Senegambia from where they migrated to Nigeria. Fulanis have their concentrated in Nigeria, Mali, Guinea, Senegal, and Niger, but are also found in several other countries in Africa. The Fulani are nomadic people wandering in search of food and water for their animals.

Religio-Ethnic Conflicts

The term 'Conflict' has been defined variously by different scholars under different ideological, historical, and cultural influences. However, Francis (2007) defines conflict as

the 'pursuit of incompatible interests and goals by different groups. Thus, when such conflicts are related to religion and ethnicity, it becomes a religious-ethnic conflict.

Causes of herders' migration in Nigeria

In Nigeria particularly in the South, East and Western parts of the country, there has been a drastic increase in the rate at which herders from northern Nigeria are migrating to these areas. According to Ikezue and Ezeah (2022), "the fact that grazing resources including pasture and water are found in different places at different times of the year, hence the need for constant mobility among cattle herders for opportunistic resource use". Herders are not stagnant as they have been seen in time immemorial to be a group of people who take temporary residence in an environment for certain periods of time around the country for the purpose of feeding their livestock. However, the current trend is a situation whereby herders in their numbers are moving to the south, east and west regions of the country. This has brought great concern to many people in Nigeria, particularly, due to the repeated conflicts they have with indigenous farmers.

There are various opinions from scholars about possible causes of why herders are migrating in their droves in recent times. Nsemba (2020) is of the opinion that the migration of herders in Nigeria is caused by desertification. He noted further that climate change has affected the world at large; and in Nigeria, one of the effects is drought and desertification. This position is shared by Okoli and Atelhi (2014). Desertification has made arable land scarce, particularly in the North, and this has affected herders in feeding their flocks (Lenshie et al., 2020), hence, they move from place to place in search of food and water for their cattle (Asueni and Nein, 2019).

Another important cause of herders' migration in Nigeria is the security challenge (Asueni and Nein, 2019). The security in the Northern part of Nigeria is getting worse every day and many lives and properties have been destroyed over the years. The livestock of herders is not left out of the conflicts. Sometimes, the herders have to leave their herds in exchange for their lives, making them run out of a means of livelihood. The herders see migrating from the North to other parts of the nation as a way of safeguarding their animals and their own lives as well (Asueni and Nein, 2019).

The growth of Human settlement is another factor that has made herders migrate. As a result of marriage, herders' families also grow, and this necessitates such families to have their own settlement. Hence, the herders migrate to other places to settle their increasing families. They prefer places where they can find opportunities of feeding their animals for temporary or permanent settlement (Asueni and Nein, 2019).

Milk production in southwestern Nigeria

The world's low production comes from Sub-Saharan Africa where dairy is mixed with crop production, this shows that Africa is a big market for dairy products. Small-scale farmers are the main producer of milk in sub-Saharan Africa. However, an intensive system of dairy management system is found in Egypt, Sudan, South Africa, Kenya, and Algeria. These high milk-producing countries' milk production in 2018 was estimated to be 45.7 million liters, with the highest output from South Africa, Algeria, and Tunisia (FAO, 2018). Ethiopia is having the largest livestock population in Africa estimated at 60 million cattle, while milk production in Ethiopia increased from 927 million liters in 1996 to 3.3 billion liters in 2018 (CSA 2018).

Niger republic produces 1,002 million liters of milk yearly. Ghana's dairy sector depends on milk importation. In Ethiopia, an intensive system of management is currently emerging as of 2018, with a crossbreed of the Zebu breed and Holstein Friesian. South Africa imported in 2019, dairy products estimated at 2.1 million tonnes, worth \$4.8 billion. In South Africa, most dairy farms exceed 500 cattle, while Ethiopia and Kenya produce enough milk for consumption. Also, Kenya is having over 600,000 smallholder dairy farmers, compared to the USA having 45,000 dairy farmers. Most cattle are exotic or cross-breed breeds given up to 9 to 11 pounds per day per cow.

Dairy production in Nigeria is not efficient, fragmented, and not economically viable. Sahel (2019) reported that Nigeria imported 97% of milk and milk products, and local breeds of Cattle yield are very low (0.7 liters per day of milk). This among other things, is attributed to the genetic markup of the local breeds. Also, the grass that the animals feed on is low in protein, implying that animals depending only on these grasses will produce a low amount of milk.

Nigeria Cattle farmers are largely Pastoralist (Fulani), who trek a long distance to graze and search for water, grazing for grasses and water will affect the quality and quantity of the milk produced by the animals compared to what happens in developed countries where the animals under intensive care, is confined and food delivered at stall, rather than grazing for food around (Maria, 2021). Kubkomawa and Kenneth (2019) reported that in Northern Nigeria, milk consumption is estimated per year at 501 per capita as compared with the national average of per year as 20 to 25 as per capita. This is below the recommended quantity by the World Health Organization that 183,000 rural families depend largely on dairy as a source of income while liquid milk of 47kg consumed by an individual in Nigeria is higher than 25kg consumed in Sub-Saharan Africa (Kubkomna and Kenneth 2019).

However, Makun (2018) noted that Nigeria's production is purely subsistence with very low production per year per cow amounting to 213 liters, while the consumption level of dairy products is estimated at 10 liters per person per year.

Table 1: showing total number of cattle in South West Nigeria in 2017

s/n	State	Extensive	Semi-Intensive	Intensive
1.	Ekiti	3992	6653	83
2.	Lagos	0	4329	0
3.	Ogun	31,771	2475	0
4.	Osun& Oyo	223, 192	67, 745	2937

Source GLW 3.0 and Federal Ministry of Agriculture and Rural development, 2017

Effects of Migration on cattle health and Dairy Production

We noted earlier that nomadic herders migrate all around with their cattle for grazing. The question here is, what effects does this practice have on milk produce or production by the cows?

Poor nutrition

The herders depend so much on the natural resources, with their unimproved natural vegetation, to take care of their herd (Gefu and Gilles 1990). Cohen (2017) compared the milk of animals with humans and discovers that whatever affects the productivity of milk, in terms of quality and quantity, in animals, is also applicable to humans. According to Cohen, just like a human woman who needs to have special food, nutrient and rest, to produce good milk yield, a cow should also be given special care and not be subjected to labour and exploitation (Cohen, 2017). In other words, as the cows migrate from place to place, the quality and quantity of milk production is negatively affected.

Exposure to harsh climatic conditions

Exposing cows to harsh climatic conditions also affect milk quantity and quality. Gefu and Gilles (1990) noted that grazing reduces the number of laborers needed to take care of the herd, and harsh weather conditions affect milk production. With ranching, it is possible to regulate these harsh conditions to a great extent.

Soft tissue injuries and accidents

Lameness and milk production. Cows suffer accidents, and most times become lame. Penev and Stankov (2015) discovered that milk yield and production is very low in lame cows compared to healthy cows. This would be so because the lame cow wouldn't be able to compete for food, and even find it difficult to eat due to its inability to move.

Inability to preserve milk

With Migration, it becomes difficult for humans to consume milk immediately. Cow milk, like human milk, needs to be consumed immediately, if not it spoils. The Herders, most times may not be where there are immediate consumers of the milk produced. Therefore, they could decide to keep the milk till they get consumers or buyers. A survey of some villages where cow milk is being produced reveals that there is no appropriate equipment for the storage of milk, especially in this tropical environment.

Lack of Food Safety- Milk contamination / Health risk of the milk produced

To preserve the milk, produce during migration, some herders use a leave called 'bomubomu' in Yorubaland. It was discovered that during migration the herders just pluck the leaves, and drop them into the milk. In case they get water to rinse, such water are not treated. Research conducted reveals that cleanliness is associated with the quality and quantity of dairy production (Singh, Chakravarty, Jadoun and Bhadauria 2012). Sometimes, the milk gets contaminated and if consumed would pose a great health challenge

Attacks on the Cattle

Sometimes the cows get attacked by wild animals and sometimes by reptiles, such as venomous snakes, leading to death. In our interactions with some of the herders also, it was revealed that sometimes the farmers also attack the herds when they graze on their farmlands. Sometimes these attacks leave some of these cows injured and sick. In such conditions, milk production becomes a challenge due to the poor state of health of the cows.

Effects of Religio-ethnic conflicts on dairy production

Ultimately, when herders and farmers clash, the cows are affected negatively in one way or the other. Based on interactions with farmers and herders in selected villages of Ondo, Osun and Oyo States, the following are the effects of religio-ethnic conflicts between the herders and the farmers in connection with milk production.

Inflicting injuries on cattle

Sometimes, the cattle are injured by the farmers in retaliation for destroyed farmlands. It has also been revealed that most of the farmers in rural areas have suffered material damages when the crop farmers inflict physical injuries on their cattle by using cutlasses, spears, or guns or by poisoning the cattle, sheep, goats (Awogbade, 1987; Gefu and Gilles, 1990; Odoh SI. Chilaka 2012; Ogbu et al., 2017; Ogo-Oluwa 2017).

Constant migration from one location to another leads to cattle restiveness

More often than not, when clashes occur between the farmers and the herders, the herders quickly relocate their positions. At times, there are sucking calves and breastfeeding cows. They usually become restive, and just as in human beings, this condition negatively affects milk production. According to some of the herders, it is sometimes difficult to keep records of the number of relocations due to conflicts with the farmers.

Cattle rustling

This is another effect of conflicts between herders and farmers. According to some of the herders interviewed, often in revenge of farms destroyed by the cattle. Some farmers and others including bandits rustle cows. Thus, once these cows are taken away, it negatively affects milk production.

Death of cattle; physically or diabolically-

Some of the herders hinted that during some of the clashes with the farmers, their cattle sometimes die mysteriously. They alleged that this occurs due to diabolical means and powers. Thus, when the cows die, milk production becomes affected.

Some Recommendations as a panacea to the problem of low milk production due to herders' farmers' clashes

The research has shown that migration by both herders and cattle is a challenge to milk production. Similarly, the research has shown that the religio-ethnic clashes between herders and farmers, is also a challenge to milk production, then what is the panacea? The team recommends the following:

Ranching

According to the farmers interviewed, they are of the opinion that the herders should ranch their cattle in their places of domicile and not invade their farms. The ranching here is not to take other people's land for ranching, rather, the farmers are of the opinion that the herders should ranch their cattle in their respective communities. The practice of ranching would improve on cattle health and proportionally boost milk yield.

Nomadic Education for the Herders

Based on interactions with some of the herders, it appears that many of them are ignorant of other grazing alternatives for their cows apart from open grazing. Thus, an implication of this is that, the herders need education. This can be provided either by government

agencies or non-governmental agencies. Part of this nomadic education must lay emphasis on keeping the cattle in the paddock and feeding them adequately. This development would increase milk production.

Cross-breeding of Cows

One of the technological advances in animal farming is the cross-breeding of cows. It is obvious that there are different cow breeds. To a large extent, the cow breeds also determine the quantity of milk produced. The variety of white cows that most Nigerian herders herd, can be improved upon through cross-breeding of the cows.

Access to loan facilities

Indeed, some of our recommendations would require money for execution. To practice ranching effectively requires money. The cross-breeding of the cows also requires money for execution. Thus, Government, banks and philanthropic individuals can give loans to the herders to build ranches and improve the diets of the cows and this in turn would boost milk production.

Conclusion

The study examined the effects of migration by Pastoralist herders and ethno-religious conflicts between herders and farmers on milk production in South-western Nigeria- with a focus on Ondo, Osun and Oyo States. From the field interactions with farmers and herders and scholarly materials consulted, it is obvious that herders' migrations and clashes between herders and farmers are inimical to milk production in Nigeria. Thus, if this situation persists, the milk industry would be under a much more severe threat. To remedy the situation, the research teams recommend- Ranching of cattle by the herders, proper education for the herders on alternatives to open grazing in Nigeria, access to bank loan facilities for the herders for ranching, and cross-breeding of cows for maximum yields in milk production

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