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RESEARCH ARTICLE

CATTLE RANCHING: A CATALYST FOR LIVESTOCK DEVELOPMENT IN CAMEROON, 1974-2010

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ABSTRACT

Over the years, livestock breeding especially cattle ranching is considered as one of the major economic activity that has contributed to modernise and improve on the traditional system of breeding. Due to increasing demand of cattle and its by-products, there was absolute need to transform the sector in order to perk up the quality and quantity of cattle production. Thus, this paper seeks to examine how cattle ranching is perceived as a mechanism to boost livestock production. The Livestock Development Corporation (LDC) and its ranches (Dumbo/Jakiri, Ndokayo and Faro) in the North West, East and the Adamawa regions were created by Presidential Decree No.74/182 of 8th March 1974. This was intended to meet the aforementioned prerequisite in the livestock sector in Cameroon. Prior to its creation, cattle breeding was primarily carried out by the Fulani and the indigenous people who bred the local red mbororo, guadali and the Aku cattle species with the use of unscientific method. With this low expectation, the government of Cameroon in collaboration with both national and international institutions contributed in boosting the agro-pastoral sector. With time and circumstances, the different activities carried out in the various ranches as well as in the traditional sector have helped to improve cattle species even though it is plagued with a lot of challenges viewed from diverse perspectives. Thus, the establishment of these ranches was intended not only to boost cattle production but also to bring socio-economic development within the areas hosting these units and beyond.

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INTRODUCTION

By the turn of the early 1960s, efforts were made by the government of Cameroon to boost and develop both the livestock and agriculture sectors. This was facilitated by the introduction implementation of the policy of Planned Liberalism¹, which led to the institution of the Five Year Economic Development Plans. These plans were developed in three phases, namely the first, second and third. The first plan went operational between 1961- 1966 under the law creating the FIDES (*Fonds d'Investissement pour le Développement Economique et Social de la France d'Outre Mer*) program of development².

¹Planned Liberalism was a policy put in place by the former President of the Republic of Cameroon Ahmadou Ahidjo, which was based on the principle of effective participation of the local inhabitants in order to achieve development. Also, it was a policy of planning orientated towards the rational use and exploitation of available resources as well as consciously directing development towards calculated and previously determined objectives in view of acquiring growth. In other words, it was a policy introduced by Ahidjo's government aimed at encouraging initiatives, seek for man's responsible participation in in the fight against underdevelopment. This was because he realized that the state was assuming the whole burden of fostering growth and development. Thus, there was the need for effective participation of the population (human investment) to help find a solution to disguise level of unemployment and other social vices.

²A. Eyinga, "From African Socialism to Planned Liberalism" in *Gaullist*

This first plan was focused on the doctrine of effective participation of the indigenous population, improving and reinforcing infrastructure which intensified the development of agricultural potentials. However, this plan failed because of the inability of the government to follow up most of the investment projects. Thus, it gave birth to the second plan whose expectations were not met as a result of the influence of foreign experts. The second plan of 1966-1971 which fell within the framework of long term objectives defined in 1960 by the Ahidjo's government, Cameroonian authorities decided to engage the services of West German experts to ensure success. These experts were not given the opportunity to come to Cameroon because the French ambassador resident in Yaounde made it known to Ahidjo that Paris could not release credits to finance the studies of this plan as long as other foreign experts remained in Cameroon³. This made the plan to end in a fiasco as the French insisted that it should be an expert from Paris to serve as the architect. The third plan which spanned from 1971 to 1976 was called the "Production and Productivity Plan". It introduced a new departure point, whereby planning committees representing the active force of the country were

Africa: Cameroon under Ahmadou Ahidjo, Richard Joseph, Nigeria, Fourth Dimension Publisher, 1980, p. 56.

³A. Ahidjo, *Contribution to National Construction*, Paris, Présence Africaine, 1964, p. 74.

put in place and the local population involved in formulating the plan⁴. Thus, the third plan which was also economic oriented led to the birth of state corporations in the early 1970's. It was from the above context that President Ahmadou Ahidjo signed Decree No. 74/182 of 8th March 1974 creating the Livestock Development Corporation (LDC) in collaboration with the World Bank⁵. The LDC was created alongside three major cattle ranches, namely Dumbo/Jakiri, Ndokayo and Faro located in the North West, East and the Adamawa Provinces of Cameroon respectively.

Conceptual Framework

According to Pagot, the word ranching is derived from a Spanish word “*rancho*” meaning a stock farm with its building manned by a rancher⁶. One of the conditions required for a ranch to effectively operate entails that the land must be enclosed with the use of barb wires and planks. This is intended to protect the animals from straying around and destroying farmlands. Therefore, a ranch refers to the raising and rearing of animals such as cattle, goats, and sheep on a large scale in an enclosed expanse of land. The word cattle ranching refers to a method of open air livestock rearing characterized by massive exploitation of pasture with the minimum use of man power⁷. On its part, a ranch consists of different portions of land separated by barb wires or planks. This has facilitated cattle rearing as groups of animals are classified according to their ages, size and species in order to ensure better productivity. Livestock refers to any breed of animal kept for commercial purposes or for local consumption. It can also be referred to as the domestication of animals either for personal use or for profit motives. According to the Livestock Mandatory Reporting Act of 1999 livestock is considered as cattle, swine, sheep, goats, fowls, and other ruminants used for the production of food items for both human and animal consumption⁸. Thus, livestock as the various cattle species that are reared with the purpose of extracting its by-products such as milk, beef, hide and horns for local consumption as well as exportation. Development, according to Arnold revolves around the acceptance and spread of population within a minimum standard of housing, education and health facilities⁹. This implies that the people are clothed, sheltered and fed during difficult moments. In addition, development implies growth whose outcome is change. These changes include improvement in factors of production, the setting up of institutions and refashioning of the society's attitude and values¹⁰.

Origin and Spread of Cattle in Cameroon

The origin of the Fulani and cattle is plagued with a lot of controversies although it is widely believed that they migrated

⁴ Ibid. pp. 58 -60.

⁵ National Archives Yaounde (NAY), decree No. 74/182 of 8th March 1974, Establishing the Livestock Development Corporation (LDC) and its units, Official Gazette of the Republic of Cameroon, 1974, pp. 722-745.

⁶ J. Pagot, *Animal Production in the Tropics and Sub Tropics*, London and Basingstoke, Macmillan Education Limited, 1992, p. 96.

⁷ I. Ismail, *Where Modernism has failed and Traditionalism has Thrived: A look at Commercial Ranching and Fulani Herding System*, Nigeria Ahmadou Bello University Press, 1970. P. 20.

⁸ Ibid. p. 50.

⁹ G. Arnold, *Aid and the Third World: The North South Divide*, London, Robert Royce Limited, 1985, p.44.

¹⁰ R.W Clower, et al., *Growth without Development: An Economic Survey of Liberia*, Evanston, North Western University Press, 1966, p.12.

from Asia¹¹. The Fulani people migrated into Northern Cameroon from Northern Nigeria in the 17th century, came along with the long horn species of cattle. In the course of their migration, they were called different names such as Ful, Peul, Foullah, Fellata and Pullo¹². Generally, the French referred to them as the Peul while the English called them the Fulani. They were also called the *Mbororo*, a term which signifies a group of cattle in the Fulani language¹³. In the meantime, they met some groups of people who were already involved in this activity. Another source holds that the Fulani originated from Hyksos in Egypt¹⁴. It is believed that the Nile Valley in Egypt was the original site of early pastoral activities. Archaeological evidence of cattle shrines in Anatolia illustrated that cattle was an important economic activity in the early civilization of Egypt around 6000 BC¹⁵. These animals played fundamental roles as they served as food, religious symbols for companionship and prestige. The 17th Century witnessed massive influx of the Fulani into the Northern parts of Cameroon¹⁶. Their interactions with the indigenous population enabled them to be involved in commercial cattle rearing. Owing to the lucrative nature of this activity and coupled with the fact that it acted as a source of wealth and as a medium of exchange, it evolved and spread to different regions of the country. Physical conditions such as climate, suitable relief, available pastures and abundant water supply favoured the spread of this activity. With the implantation of this activity in Cameroon, there was need to improve the traditional cattle rearing methods through the creation of cattle ranches. Ranches were intended to coordinate and harmonize the smooth functioning of cattle rearing all over the national territory.

The presence of Fulani cattle breeders in the different parts of Cameroon eventually made livestock breeding, especially cattle keeping, to be considered as one of the major economic activities that did not only contribute to improving the lives of the people but equally laid a solid foundation for the establishment of cattle ranches in the different regions of the national territory. It would be recalled that the livestock sector was initially strictly in the hands of the Fulani cattle breeders who used outmoded and unscientific breeding methods that resulted to low output. The Fulani primitive method of cattle production necessitated the establishment of the state corporation in Cameroon.

Socio-Economic Importance of Cattle Prior to Ranching Systems

Although there are many changes in the livestock sector, cattle ranching is of great significance to the people involved in it in the different parts of the world. In Africa in general and Cameroon in particular, cattle rearing is important in the economic life of the people because it serves as not only a source of generating income but also as a source of providing protein (milk and meat). Its by-products such as blood, horns and bones are of great value. Also in the agricultural domain

¹¹ Pagot, *Animal Production in the Tropics*, p.145.

¹² V. G. Fanso, *Cameroon History for Secondary Schools and Colleges, vol. II: Pre-colonial Times to the Nineteenth century*, London, Macmillan Press Limited, 1989, p.28.

¹³ Ibid. p. 40.

¹⁴ F. K. Buah, *West Africa and Europe: A New History for Schools and Colleges*, London, Macmillan, 1967, p.127.

¹⁵ Ibid. p.135.

¹⁶ Fage, *An Introduction to the History*, p. 10.

cattle is used in the ploughing of farm lands. But in most Fulani communities, cattle play a significant role in religious, social custom. It also act as a source of family wealth as well as a mark of respect in the community. For example in northern Sudan, a typical Fulani cattle breeder would rather prefer to die in hunger than to slaughter his cow. Baker thus describes the outlook of the Dinka of the Sudan as a result of living in such close contact with their cattle, their animals have come to assume a religious significance¹⁷. Within this traditional set-up, every self-respecting young man in possession of cattle is highly respected. These cattle are specially fed and groomed and their horns are specially decorated with tassels and regarded with affection bound to be worshipped¹⁸. Therefore, it can be observed that in some communities in Africa, cattle have become an inseparable part of the people's tradition.

Most African communities believe in life after death in the form of spirits¹⁹. The spirits of ancestors assume great importance to the individual and to the whole family. It is believed that spirits have a vital protective role to play as they are considered to have the responsibility to look after the welfare of their living descendants. For this reason, traditional formalities connected with the dead are meticulously observed. For example, before the burial of an adult person in the pre-colonial society of Nigeria, cattle are slaughtered to accompany his soul²⁰. About a year after the person's death a canonization ceremony is held whereby, cattle are slaughtered for the feast. In addition, some tribes in southern Africa such as Mozambique select mature cattle in their herds to accommodate the ancestral spirit. From the social perspective, it is worth noting that some African communities such as the Kom people in Cameroon use cattle in the payment of the bride price²¹. However, this custom has undergone changes and modifications. An agreed monetary equivalent in the place of cattle is now acceptable in the settlement of the bride price. Besides its role in the payment of bride price, it is equally used as a means of paying fines for various crimes committed. The number of cattle charged as fine depended on the gravity of the crime which at times was mostly related to witchcraft practices. Nowadays fines for most offences can be paid in cash. However, certain other offences such as breach of custom or moral taboos are a very serious problem. These offend the spirits whereby subsequently, they must be appeased through ceremonies in which cattle are used.

In addition, when incest is committed, cattle are usually used as a means of cleansing²². The individual concerned may be ostracized from the society or a fine is imposed by the parents of the girl. This form of fine varies from community to community. For example, the Sotho parent in South Africa will demand a white beast but the Mashona as well as the Swazi parents will require four to five cattle to be produced by the

offender. The number of cattle owned by an individual is equally important. This can be viewed from the fact that most people involved in this activity wish to see the numbers of their cattle increase. For example, if a man loses part of his cattle, he is still better off than if he had lost half of his two cow herd. This is very common especially with the Fulani people in Northern Nigeria. Under the traditional system, land is commonly owned. Therefore no one derives right of ownership of the piece of land which he occupies. Cattle are recognized as an alternative form of wealth to land. The accent, however, tends to be placed on the numbers rather than the quality of animals. This is so because little or no differentiation is made, in value, between one animal and the next. As the number of cattle an individual owns increases, so is his social standing correspondingly enhanced²³. However, this attitude (of numbers rather than quality of animals) has changed somewhat among the Mashona groups in recent years and the quality is now being considered to some extent. It is worth mentioning that cattle have an important economic role to play because it is considered as a stable form of currency neither affected by inflation and devaluation. Also, the value of the animal in terms of calves born too appreciates faster than money in the bank. This is particularly true because indigenous cattle are highly fertile even under modest levels of husbandry. As a rule an animal is not sold until its reproductive potential has been fully exploited. Cattle provide the cheapest and the most dependable form of power in rural areas of Africa. Mechanization has advanced to an extent in those countries where cattle are reared. The position of cattle in one Rhodesian African village is very important. According to a survey carried out in one tribal village in Sudan between the years 1966 to 1967, it was noted that in the 12 months period cattle were involved in several traditional ceremonies²⁴.

The Establishment and Objectives of the Ranches

The Livestock Development Corporation better known by its French acronym SODEPA (La Société pour le Développement et d'Exploitation des Productions Animales) was created by Presidential decree no. 182/74 of 8th March 1974. It was created along three ranches which had as responsibility to serve as an experimentation, demonstration and vulgarization centres of new techniques in cattle rearing. It also had as objective to ameliorate and improve on the traditional systems of cattle rearing. To achieve this, traditional cattle breeders were made to participate with the aim of improving the quality and quantity of meat. Furthermore, the ranches had as objective to ameliorate the skills of traditional stock breeders through the study of the ecological zones. This was intended to eradicate the prevalence of tse-tse flies that caused trypanosomiasis amongst cattle. This was realized through educative programs and the sensitization of traditional cattle breeders, which was facilitated through the granting of periodic loans by FONADER²⁵.

¹⁷P.R. Baker, "Development and Pastoral People of Karamoja: An Example of the Treatment of Symptoms". Proceedings of International Conference on Pastoralism in Tropical Africa, Niamey, Niger, 1972, p. 55.

¹⁸Ibid. p. 59.

¹⁹Ibid. p. 70.

²⁰D.S. Ferguson, 'Nigerian Beef Industries', Cornell International Bulletin, University of Khartoum, 1967, p. 90.

²¹P.N. Nkwi, *Traditional Government and Social Changes: A study of the Political Institution among the Kom Fomdom in the Cameroon Grassfields*, Fribourg, University Press Fribourg, 1976, p. 60.

²²Ferguson, *Nigeria Beef*, p. 101.

²³Ferguson, "Nigerian Beef Industries", p. 25.

²⁴J.C.M. Trial and K.E Gregory, *Swahili Cattle: An Evaluation of their Potential Contribution to Milk and Beef Production in Africa*, International Livestock Center for Africa (ILCA) Addis Ababa, Ethiopia, 1981, p. 33.

²⁵FONADER, also known as the National Rural Development Fund was created in August 1973, aimed at boosting agricultural and livestock development schemes, as well as the promotion of activities geared towards achieving economic development. In 1978, FONADER had a budget of about 9.218 thousand million francs CFA; K.G. Fuh, "the Socio Economic Impact of the liquidation of the Wum Area Development Authority (WADA) on Wum

The functioning and management of the LDC and its units was placed under the supervision of the Ministry of Animal Breeding. The ministry was charged with the responsibility of fighting against the spread of tse-tse flies, which was done through the creation of special missions known as *Mission d'Eradiation des mouches mouches*²⁶. This mission had as duty to organize training programs in these ranches and to send specialists in the domain of livestock production for further studies. The growth and evolution of these ranches have enhanced Cameroon pastoral activities, through the introduction of modern methods of cattle breeding especially artificial insemination. The LDC which was initially under the Ministry of Animal Breeding by 1984 was now transformed to the Ministry of Livestock Fisheries and Animal Industries. The change of name was because the ministry was expanded and in charge of all animal species. This corporation had as responsibility to improve cattle production as well as foster the socio-economic growth wellbeing of the local population through its diverse activities.

Aspects of Cattle Use

Livestock breeding predominantly cattle breeding was carried out by indigenous as well as Fulani people in Cameroon was largely dictated by the need to improve the socio-economic life of the inhabitants. Generally, a greater proportion of the people are farmers highly involved in livestock rearing. It is important to note that about more than 80% of the population are engaged in this sector. The Northern part of Cameroon especially the Far North and Adamawa areas as well as the East, West and North West regions are areas with high cattle population when compared to Littoral, Centre and South West regions. An outstanding factor responsible for the variation in cattle population was the fact that the Fulani people who came into Cameroon through the Northern part around the 17th century reinforced the culture of cattle keeping which was already practised by some communities in this area but on a small scale destined for immediate consumption²⁷. The extension of this activity to different parts of Cameroon gradually made it possible for cattle rearing to gain grounds as it was considered as an income generating activity as well as source of prestige²⁸. The income generated were use to provide basic needs and educate their children even though most of the Fulani communities were reluctant to send their children to school. This was because they lived a nomadic way of life characterised by constant seasonal movements with their cattle in search of greener pastures. This seasonal movement is known as transhumance²⁹. Nevertheless, cattle rearing is a multidimensional industry whereby its by-products such as meat and milk were constantly demanded by the population. The hides and skins of the cattle are tanned into leather and the bones were used in making fertilizers and other products³⁰. The external fat known as tallow is used in making candles. The

Central Sub Division", Maîtrise Dissertation in History, University of Yaounde I, 2004, p. 100.

²⁶ C.S Kimah, "Dumbo Cattle Ranch 1974-2008: A Historical Investigation", Master Dissertation in History, the University of Yaounde I, 2010, p. 45.

²⁷ A. Mahdi, *The Spread of Hausa Culture in West Africa 1700-1900*, Ahmadou Bello University Press, Ibadan, 1976, p. 55.

²⁸ Ibid, p. 60.

²⁹ D. Stenning, "Transhumance, Migratory Drift and Migratory Patterns of Pastoral Fulani Nomadism", *the Journal of the Royal Anthropological Institute of Great Britain and Ireland*, vol. 87, West view Press, 1957.

³⁰ Trial and Gregory, *Swahili Cattle*, p. 40.

glands supply many hormones which are used in medicine. Horns are used in making traditional cups³¹. Besides using its by-products, cattle are also important in agricultural practises. They are used as a means of pulling ploughs and farm carts especially in large plantation estates³². Cow dung is equally important as it is used as fertilizers by some farmers to improve on the quality of the soil.

From the above discussion, it is evident that cattle and its activities has played a significant role in changing the life style and the living standard of the people. This was because it provided employment opportunities and served as a source of food. The income generated also provided households with basic facilities. In this light, it is worth noting that the livestock sector was in the hands of traditional stock breeders who used unscientific methods in cattle rearing. This partly explains why the rate of cattle production was relatively low with a total number of 3.205 600 cattle before the creation of the corporation and its ranches³³. However, with the introduction of the scientific method of artificial insemination, new breeds of cattle have resurface. Thus making it possible for our local mbororo and Aku cattle specie to fast disappear.

Cattle Ranching and Livestock Development

The growth and evolution of these ranches have enhanced Cameroon pastoral activities through the introduction of modern methods of cattle breeding such as artificial insemination. The method is a process whereby the semen (sperm) of a bull is injected into the reproductive system of a female animal (heifer) artificially³⁴. The semen is acquired through the process of tapping of the penis of the animal in order to stimulate it and make it tense and curious, thus causing it to ejaculate immediately. The process of extracting semen is the same when compared to the process of milk extraction³⁵. In the meantime, there was need for this method to be introduced in the different ranches. This was intended to increase cattle production as well as to empower traditional cattle breeders especially in those areas hosting these ranches. The need to significantly scale-up the capacity of cattle products such as milk and meat as well as improving their quality and quantity was also taken into consideration. As a livestock development strategy, this method was considered as a means to contribute to the government policy of gradually reducing the importation of cattle and its products. This is also seen as a protective strategy for the growth of the livestock industry and a tool for poverty reduction especially in the rural milieu. In addition, the introduction of artificial insemination in ranches was motivated by the need to expand and diversify the existing cattle gene pool in Cameroon. This was because the cattle breed was predominantly the red white mbororo species that were not productive. To establish and maintain a nucleus herd of dual purpose breeds that will serve as a source of improved genetic material for smallholder cattle farmers by simultaneously increasing meat and milk productivity. Practically, this activity shall potentiate the objectives of Government's Smallholder

³¹ Fuh, "The Socio Economic Impact of the Liquidation", p. 50.

³² Ibid, p. 55.

³³ p. 57.

³⁴ S.H., Horst. Seifert, *Tropical Animal Health*, Germany, Kluwer Academic Publishers, 1992, pp. 510-520.

³⁵ Ibid., p. 523.

Milk Development Project³⁶. Also, the introduction of this scientific method was guided by the need to foster partnership, collaboration as well as enhance training and learning as a strategy to increase its capacity to support local cattle farmers. In the meantime, the Dumbo and Ndokayo ranches witnessed an increase in cattle population as a result of the introduction of the process of artificial insemination. By February 2008, 260 hybrid calves (Simgoud) out of 160 gestations at different stages were delivered in the Dumbo ranch while in the Ndokayo ranch, 28 calves were born as a result of this method³⁷. Consequently, the number of cattle have increased from 6500 to 6760 in the Dumbo ranch while in the Ndokayo ranch, there was a gradual increase realized from 2662 to 269019. The situation of the Faro cattle ranch was not favorable for this method because of environmental constraints such as the harsh climatic conditions, the lack of trained personnel as well as the prevalence of tse-tse flies within this region.

Glitches and Way forward to ensure Sustainability

The growth and development of the livestock sector in Cameroon is endowed with a number of challenges that can be viewed from diverse perspectives. The changing patterns and trends of evolution of cattle ranching both operated by the traditional and stated are plagued with problems that if much attention is not accorded to it to ensure continuity, thus it is bound to moribund. The harmful environmental effects of livestock production are becoming increasingly serious at the local, regional, national and global levels and there is an urgent need to address this phenomenon. Extensive livestock production especially cattle ranching plays a critical role in land degradation, climate change, water and biodiversity loss. The problems surrounding livestock production cannot be considered in isolation nor limited to the environment. Livestock rearing particularly cattlebreeding have adverse effects on Agro-Pastoral activities in the environment because it contributes to the emission of gas into the atmosphere. Generally in Cameroon, the livestock sector emits carbon dioxide (CO₂) which comes from human-related activities but produces a much larger share of greenhouse gases. It generates 65 percent of nitrous oxide and has 296 times the Global Warming Potential (GWP) of CO₂³⁸. Most of this comes from manure and it accounts for 37 percent of all human-induced methane which is largely produced by the digestive system of ruminants and 64 percent of ammonia contributes significantly to acid rain. In Cameroon, livestock activities use 30 percent of the land surface. As forests are cleared and lands acquired to create new pasture and ranch zones, it is a major cause of deforestation, especially in those areas hosting these ranches.

The livestock sector promotes serious pollution of the environment. Following the national campaign launched by the Ministry of Territorial Administration on 11th January 1985 to promote hygiene and public health, it was noticed that the activities of the slaughter house in Etoudi (Yaounde) had (still) a devastating effect on the environment³⁹. The waste products

which were supposed to be disposed at Ngousso were instead directed towards a small stream behind the slaughter house. As a result of this, the agent in charge of public cleaning usually find foetus and pieces of meat which were improper for human consumption after they have been washed. In order to remedy the problem of water pollution, the wasted water leaving the slaughter houses has been treated with hypo chloride chemicals and *l'eau de javel*. The trees planted are known as the Awilo species which is an environmental friendly plant recommended by specialists in environmental management. The presence of these trees helps to absorb the unwanted gases in the atmosphere, thus reduces the prevalence of gases and pollution. These trees absorb the gases to release water and carbon dioxide in the air, thus reducing irritating smell in the *abattoir*. Equally, the essence of planting trees around the Etoudi and Bonandale slaughter houses in Yaounde and Douala respectively was intended that these trees should absorb all the CO₂ that was emitted into the atmosphere through the excreters and urine of the cattle. This was as a result of the presence of the cattle awaiting slaughtering.

Another major problem faced by these ranches is pressure on the grazing lands thus leading to environmental degradation. The traditional stock breeders in these areas hosting these ranches have many cattle which exerts a lot of pressure on the available grazing land. In order to reduce this pressure, efforts were made after carrying out feasibility studies to persuade the cattle famers to sell some of their stocks. This was intended to reduce animal population in the area due to high mortality rate caused by the prolong period of dry season. Besides the selling of these animals, it was recommended that these farmers could do better with the implementation of technical follow up and supervision from experts in the domain of livestock. Besides air, water and land pollution, there is also the problem of frequent occurrence of thunder and lightning. This phenomenon is recurrent especially during the rainy season.

Conflicts is a common phenomenon which is recurrent between cattle graziers and farmers as well as those involved in cattle ranching systems. The activities of cattle rearing carried out by traditional stock breeders and farmers involved in subsistence crop farming generated conflict. For example, a group of animals from the Dumbo ranch destroyed farmlands of some individuals around the Marshi village⁴⁰. Generally, this act is very common especially during the period of transhumance which gradually led to farmer-grazier conflicts. Furthermore, in the Ndokayo ranch in the East region, the presence of gold miners within the ranch zone has generated a lot of conflict. This is because of negligence on the part of the administration who allow unscrupulous individuals to carry out this act, thereby exposing the grazing land to be fragile. Consequently, most of the animals in the ranch during the period in movement usually sustain fractures and injuries. The prevalence of both animal and human diseases was among the problems that disrupted the activity of cattle rearing in most parts of Cameroon⁴¹. There were two categories of animal diseases which include infectious and contagious diseases. An infectious disease is a situation in which an animal is invaded

³⁶ H. John, *The Artificial Insemination of Cattle*, Cambridge University Press, 1947, p. 61.

³⁷ NRA, file No. 23, Annual report on animal production in the Ndokayo ranch, 1979.

³⁸ Fuh, "The Socio Economic Impact of the Liquidation", p. 46.

³⁹ MINEPIA Archives, report on the activities of slaughter house in Yaounde,

1985.

⁴⁰ DRA, file No. 17, Administrative Report of the Dumbo ranch, 2006.

⁴¹ Anthony J. Smith, *Tropical Agriculturalist: Animal Health*, London and Basingstoke, Macmillan Education limited, General Principles, vol. I, 1996, p.1.

by other organisms such as bacteria or parasites while contagious diseases are those that developed within and survived out of the animal⁴². They are easily picked up from the environment. Animals usually suffered from persistent diseases depending on the period of the year, degree of infection and species that fell prey to the plague in question. Infectious diseases are those diseases that come as a result of the invasion of organisms such as bacteria and parasites. While contagious diseases are those inner diseases that develop and survive within an animal. The intensity of the diseases usually fluctuates depending on the period of the year. Diseases can be transmitted from one animal to another through different means such as snake bites, injuries, and infected animals especially during periods of transhumance, discharge from infected animals, and consumption of poisonous grass species. The most common diseases affecting cattle rearing include tuberculosis, strypto, trypanosomiasis, anthrax, foot and mouth disease, cowdriosis, black leg. The causes of these diseases are manifested from one stage to another thereby leading to some devastating symptoms that affect the cattle production and productivity in the ranches. The presence of mosquitoes and tse-tse flies were of great threat to the lives of the animals and those taking care over them. The effect of mosquitoes bites on humans caused malaria while tse-tse flies caused trypanosomiasis to the animals. With the presence of malaria in the human system, the activities of the ranch were halted as the herdsman could no longer move behind the animals. As a matter of fact, the live of the animals were negatively affected hence, provoking an increase in dead rate among the animal population.

Conclusion

The attempt by every government to expand and develop its livestock sector besides agriculture is of great significance to foster economic growth. These are the key sectors that have helped in bringing development taking into consideration its ramifications on the socio-economic landscape. Cattle rearing prior to ranching systems in cameroon was essentially in the hands of local breeders who were were unable to meet up with the quantity and quality. They bred the local aku, guadali and mborror specie with nthe use of the traditional sytem of breeding which was considered less productive. In the meantime, as part of developmental strategy to boost this sector, there was the introduction of the scientific method of artificial insemination in the ranches. Within this context therefore, this paper has explored how cattle ranches of the LDC were profitably exploited to enhance livestock development and foster socio-economic growth in the different regions of Cameroon notably in the East, North West and Adamawa regions. The conceptual framework facilitates the understanding of key concepts used in the analysis. Furthermore, the paper demonstrates that prior to the establishment of these ranches, cattle played a significant role in the different localities. Thus, the evolution of the activities of cattle ranching over time and circumstances, laid the bases for the bases for this sector to gain grounds. But unfortunately, these activities were perturbed by some challenges which were viewed from diverse perspectives. Thus, the outcome of this paper focuses on presenting the cattle ranches operated by the LDC as a demonstration center as well as serving as a catalyst for livestock development in the traditional sector.

⁴²Ibid. p 10.

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