



---

## **General Overview of the Problem of Animal Production in the Democratic Republic of Congo**

Musalizi Muharabu Roger-Lafleur<sup>a\*</sup>, Mukandama Ndolandola Jean-Pierre<sup>b</sup>,  
Kitambo Bondele Rebecca<sup>c</sup>, Muliri Big. Lucien<sup>d</sup>

*<sup>a,b,c</sup>Searchers at the Faculty of Renewable Natural Resources Management, University of Kisangani,  
Democratic Republic of Congo*

*<sup>d</sup>Searcher at the Faculty of Administration and management, Shalom University of Bunia, Democratic Republic  
of Congo*

*<sup>a</sup>Email: [lafleur.musalizi@unikis.ac.cd](mailto:lafleur.musalizi@unikis.ac.cd), <sup>b</sup>Email: [mukajp@yahoo.fr](mailto:mukajp@yahoo.fr), <sup>c</sup>Email: [kitambolafleur@gmail.com](mailto:kitambolafleur@gmail.com)*

*<sup>d</sup>Email: [mulirilucien1@gmail.com](mailto:mulirilucien1@gmail.com)*

### **Abstract**

In a world pulverized by the ever-growing population, animal production, on the other hand, displays a behavior of inequality. This study based on documentation has set itself the objective of listing some factors that handicap animal production in the Democratic Republic of Congo.

To this end, it was observed in this study that the low salary of central administration staff, the lack of interdependence between agriculture and livestock, the problem of evacuation of agricultural products, lack of science in animal production, slow and costly research on animals, etc. are the main factors blocking animal production in the Democratic Republic of Congo.

**Keywords:** Issue; production; animal.

---

*Received: 6/12/2023*

*Accepted: 7/17/2023*

*Published: 7/28/2023*

---

\* Corresponding author.

## **1 Introduction**

While population growth is increasing at an increasing speed, animal production, for its part, displays a behavior of slow progression that cannot allow equalization on the one hand and on the other hand, there is a constant concern in man to eat since it is a need in order to satisfy this form of instinct [16].

In the current form of life, characterized by an uncontrollable galloping population in developing countries, the demand for food is becoming more and more growing on the one hand and on the other hand, we are witnessing a traditional or characterized by archaic practices that do not allow for the growth of animal production [1]. The developing countries live in an inequality between the agricultural production, which is low and a constantly growing demography. In addition, the Democratic Republic of the Congo is currently experiencing a huge population growth estimated at 86 million in 2017 by the National Institute of Statistics, while animal production remains insufficient to meet the food and nutrition needs of the populations. This situation has been further aggravated by the recent health crisis of the COVID-19 pandemic, which has also caused the sharp increase in food prices leading to food insecurity. It would still take very appropriate and determined measures to deal with it.

Producing for a country is a fundamental right of the population. Livestock production can be both a cause and a consequence of not only undernourishment and malnutrition but also an actor in the deterioration of the economic, social, environmental and political context of a country. To start from the definition, animal production is the set of techniques relating to the breeding of animals producing various products suitable for consumption. In order to hope for animal production, there is a synergistic rule governing the producer and the animal, in particular, a good breeder must love his animals and surround them with a lot of care. Provide the animal with healthy food and a preferential habitat, protect the animal against diseases, parasites and wild animals, treat them without violence and with patience and surround them with trust and friendship, while in return, according to Dehoux [2]. A good animal regularly provides a variety of products (milk, meat, eggs, leather, skin, wool, young animals, droppings, energy, work, sharing). From the foregoing, it can be deduced that the right of the animal (comfortable housing, balanced diet, care, ....) constitutes the duty of the breeder and the duty of the animal (to provide the various products to the breeder,...) constitutes the right of the breeder. Indeed, according to some authors, animal production comes up against a certain number of factors that currently limit its production, in particular, the lack of livestock buildings, lack of veterinary products and materials, for other reasons, lack of capital, and lack of land [3]. Traditionally, in agriculture, the factor determining or limiting production was the land factor [4], in the Democratic Republic of the Congo, given the galloping demographic evolution and the availability of land 80 million unused arable land, the land factor has been replaced by the human factor. The Congolese man is the main factor blocking animal production in the DRC. It is time to review the various parameters that block animal production in the DRC in order to prepare in future publications on strategies and action programs in the future that can help eradicate this scourge in a galloping population. .

This study aims to determine the problems that block the development of animal production in the Democratic Republic of Congo in order to allow a better understanding of the diversity of problems that handicap animal

production in these regions.

## **2 Brief biogeographical overview of the Democratic Republic of Congo**

This theoretical analysis comes from a general observation made in the Democratic Republic of Congo (DRC).

The DRC is a Central African country with enormous agricultural potential, estimated at more than 80 million hectares of arable land, and its position straddling the equator allows it to enjoy an alternation of climates conducive to agricultural production interrupted crops throughout the year [5], favorable for large-scale fodder production.

The DRC has a high potential in water resources. Rainfall is also high and incessant. The Congo River has a high flow rate (40 000 m<sup>3</sup>/s) and a dense network of rivers is dense. River flows are also high and regular over much of the country. There are also many lakes; the country has many wetlands. The area of water bodies represents 3.5% of the national area. There are also many underground aquifer formations, just as the DRC also has 37 km of coastline on the Atlantic Ocean. The DRC shares nearly 6500 km of natural border with eight neighboring countries. This border is materialized by the rivers (Congo River, Ubangi, Bomu, Ruzizi, Luapula, Kasai and Kwango) as well as by the Mobutu, Idi Amin, Kivu, Tanganyika and Moero lakes. To our knowledge, the management of these international waters has never been a national concern.

The DRC has a heterogeneous vegetation but very degraded by human influences, determining a very fragmented phytogeographical map. From the agrostologist point of view, the fodder landscape is rich because it presents a large range of animal feed, including legumes (Dicotyledons), Gramineae (Monocotyledons), or Poaceae, sedges (plants with characteristic stems of triangular section), and so many other forage species. The abundant rain with its climate that allows an alternation of the seasons in the DRC allows a more dense diversified fodder development, constituting the basis of breeding for this Republic of our ancestors [6].

## **3 Main factors hampering the development of animal production in the Democratic Republic of Congo**

### ***3.1 Constraints related to usable soils***

The Democratic Republic of Congo has expanses of unexploited arable land, while they can be used on one side by livestock and their pastures and on the other side by dwellings. In industrialized countries, urbanization has degraded areas suitable for agriculture and livestock; according to Nyongombe [12], they were forced to follow in the footsteps of intensive livestock farming using cereals and legume seeds and agro-industrial by-products for reasoned and rational production. The Democratic Republic of Congo (DRC) has a potential of 80 million hectares of arable land. However, only 8 million are exploited, let be 10% [17]; given the expanses possessed, the Democratic Republic of the Congo is able to support the food needs of the ever-growing world populations in terms of food and animal products for centuries and centuries without getting tired. Unfortunately, no conscientious effort is taken by the central government downstream and by the Congolese population upstream.

The DRC is almost as big as Western Europe. Yet only a fraction of its arable land is cultivated [7].

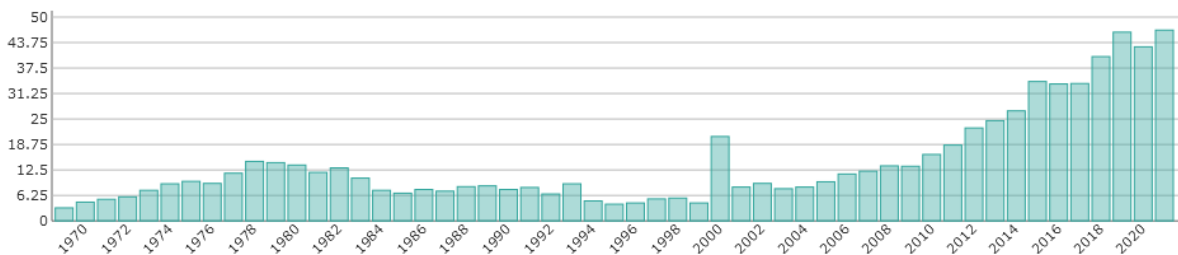
The process of animal production begins with the installation of pastures to create food for animals in order to allow a rational and sustainable diet without interruption. This implies the occupation of land spaces not occupied by urban agglomerations.

### 3.2 Low salary of senior staff

This documented study shows that the salary of civil servants and career agents is at an almost lower level in the Democratic Republic of Congo. The low income obtained by state and private officials does not favor small initiatives to start a family breeding of domestic animals; and consequently, the consumption of plant products to the detriment of animal products. Several parameters explain the low salary of the civil servants, the main one being the economic performance of the DRC, which is weak and cannot allow the leaders to grant a decent salary to the employees.

In the province of North Kivu, it has been found that the Nande population, whatever non-agricultural occupation they practice in their life, they also and conditionally practice an agricultural activity; the monthly salary obtained from the state service, allows them to initiate small agricultural activities.

Its Gross Domestic Product (GDP) can measure the main economic performance of a country. That is, the total quantity of all goods and services sold in the country. Globally, the 2021 gross domestic product was around 10,301 Euro per capita. On the other hand, GDP in the Democratic Republic of Congo reached 488 euros per inhabitant, or 46.80 billion euros for the whole country. The Democratic Republic of the Congo is therefore currently in 7th place among the major economies according to world data published in 2023 [8]. The evolution of the GDP of the DRC in Euros is shown in the figure below.



**Figure I :** Evolution of gross domestic product in billions of Euros 1970 – 2020 (Anonymous, 2023).

The situation of low GDP for the Democratic Republic of Congo cannot allow the granting of a modest salary and consequently, this handicaps the promotion of family farms by the executive agents.

Moreover, in poor countries such as the Democratic Republic of Congo, livestock farming (small and large livestock) is also practiced by state officials across the country. The main reasons for this practice lie in the complementarity between the two activities. On the other hand, the indecent salary does not allow them to embark on this activity which largely depends for the most part on the financial means to start. Most public administration officials do not have access to agricultural credits which, moreover, these finances should exist for them in order to enable them to ensure their survival as well as the future of their children.

### ***3.3 Lack of interdependence between agriculture and livestock***

For many years, the goal of agricultural and zootechnical research in Africa has been to increase crop and livestock yields. Improving herd performance was based on the introduction of improved breeds and concentrated feed [9] from agriculture; this same situation of increased crop yields would depend in part on the use of manure from farms in the case of complementarity between the two. In poor countries or in certain developing countries, it is easy to see that agriculture and livestock farming constitute two activities, that is to say that each forms a separate sector, whereas in developed countries, these two activities are practiced together. In agricultural practice, one needs animal products such as manure from the herder to increase the crop yields while the herder needs corn, soybean and sorghum etc. from the farmer to increase the productivity of these animals. The two sectors are interdependent on each other in developed countries where they are practiced together.

### ***3.4 Problem of evacuation of agricultural products***

This concerns the state of certain evacuation routes for livestock products that are non-existent or in poor condition, the problem of which arises acutely during the transport of animals. Transporters spend several days before reaching the place of sale or consumption, spending several nights on the way.

The inadequacy of communication networks means that very often animals for slaughter are transported on the hoof from the breeding regions to the centers of consumption. Consequently, this practice is not profitable because of observed weight losses corresponding to a cost lower than that of transport. It is noted that animals often reach at their destination emaciated and that it may be desirable to make them regain weight before slaughter, hence the interest of fattening structures near the slaughter sites [2].

In summary, the following factors create handicaps in animal production in the Democratic Republic of Congo:

- enormous problems in the transport sector of animal products between production centers and places of consumption;
- difficulty in accessing markets for “breeders because of the poor state of the roads”;
- Extortion, harassment and looting by soldiers and armed gangs during the transport of animals to places of consumption, observed throughout the national territory of the Democratic Republic of Congo.

### ***3.5 Lack of science in animal production***

The results of research in zootechnical sciences are not applied in a generalized and sustained manner in developing countries where farming methods and techniques have remained traditional and archaic.

Science has a moral mandate to uphold: it must guide the expanding and rapidly changing livestock sector to minimize its negative impacts while maximizing its potential benefits. Among the challenges facing science today are the "old" questions, such as increasing the efficiency of food conversion and the nutritional value of animal diets still valid today. But also a series of «new" themes with wider social repercussions such as the impact of livestock on the environment or the use of biotechnological applications which are often the subject of

fierce debate [10]. On the other hand, science can enable the intensification of animal production: research in animal nutrition and feeding and animal genetics still promise significant gains in feed conversion efficiency. Intensifying production means industrializing breeding systems, especially pigs and poultry. Modern industrial animal production relies on a shrinking genetic base particularly in dairy animals, poultry and pigs. Science can help improve molecular characterization methods and identify key biodiversity to set priorities for genetic conservation. The Democratic Republic of Congo is a country that shows strong democratic growth, science should allow mass production and in a reasoned way in order to meet the food needs of the populations. The biotechnological advances developed such as cloning, embryo transfer, transgenesis, and the shortening of the reproductive cycle in animals should allow the Democratic Republic of Congo to meet the food needs of its people.

Genetic engineering, or the set of processes by which the genetic structure of an organism is altered by removing, introducing or replacing DNA, is an evolving scientific field. New genome rewriting techniques, for example, provide much faster and more accurate results than traditional breeding techniques. Advances in molecular biology provide molecular and computational tools that allow scientists to engineer specific traits of interest, an approach known as synthetic biology. One of the offshoots of synthetic biology is so-called "genetic guidance" engineering, also called gene drives, which makes it possible to propagate genes of specific interest at a higher frequency than that which would be achieved by natural heredity [11].

### ***3.6 Slow and expensive animal research***

Research on animals is slow probably because of their very long reproduction cycles on the one hand and on the other hand, they are more expensive because of the high price of the animal and its maintenance. Compared to agriculture in its strict sense, where the price of a seed proposed to be improved is cheaper and their vegetative cycle is short, which can therefore allow rapid improvement and in a well-determined short time [12]. For example in cattle, the Heifer is put into the young bull and vice versa at the age of 2 to 3 years respectively. In improved pigs, the sow and young boar are respectively put to the boar and the sow at the age of 8 to 12 months. To fix a cattle breed, crossbreeding work must go all the way to the eighth generation to achieve strong breed heritability. And that takes at least 25 years. In the province of Ituri, an improvement of cattle of local breed from the Brown Swiss lasted 30 years so that they reached a live weight of 600 to 800 Kgs in the zootechnical station of INERA-Nioka in the territory of Mahagi. Unfortunately, all this bovine improvement lapsed because the improved animals were recently plundered by neighboring countries during the Congo Liberation War led by Laurent Mzee Kabila in 1996.

### ***3.7 Land rights issue***

In the Democratic Republic of Congo, land conflicts exist at the local, territorial and even national level, we notice large-scale land appropriations for some and total lack of land for others. In the province of Tshopo, people who have nothing to do with farming, while those who intend to farm do not own any own large tracts of land. Large concessions are held as prestige. This situation does not favor animal production, thus contributing to a crisis. For example, in the east of the Democratic Republic of Congo, Hema herders sometimes rebel

against others in the province of Ituri in search of grass; the Shi herders and the Tutsis vigorously covet the lands of other agricultural tribes such as the Vira-Fuliiru in the territory of Uvira, etc. In the northeast of the DRC, there is the case of M'bororo people coming from Sudan and Chad in search of fodder to graze and water their herds, monopolizing the lands of this region to the detriment of the indigenous Congolese people. Rwanda since the years 1974-75 gradually invades Mount Mulenge which belongs exclusively to the Vira-Fuliiru people in the territory of Uvira. The region of Masisi, Ruzizi... by the Tutsi people coming from Rwanda. In the west of the DRC, Angola envies the mining town (diamond) of Kayemba. These are the few examples that can illustrate the land conflicts in the Democratic Republic of Congo.

### ***3.8 Political instability and undemocratic government regime***

Political instability and the war situation in the Democratic Republic of Congo have deeply disrupted animal production activities. To this is added the normal marketing channels for animal products of animal production, which are also blocked, accelerating the discouragement of commitment in the production process by decision-makers. The proliferation of armed groups in the Democratic Republic of the Congo has largely contributed to the decline in the development of animal production; rape, theft, killings, confiscation of property, illegal taxation, are their modus operandi which discourage local, national and international investors. The troubles of the armed groups and the bad organization of the national army slow down and destroy all the political, economic and social structures of the country. This climate of instability does not allow national and international investors to devote themselves perfectly to the development of livestock. As a result, livestock facilities established across the DRC for sustainable animal production have been abandoned, and we are now witnessing the return of subsistence farming in many urban and rural households. Poultry and other backyard animals are raised for subsistence in almost all households in the DRC, in addition to large animal production, which involves large livestock. Goats are also raised in several households for subsistence [13].

### ***3.9 Livestock enemies: diseases and predators***

In tropical environments, several diseases annoy domestic animals [2]. Like all living beings, in fact, cattle encounter competitors, perhaps victims of carnivores, insects, diseases, etc. They are even more sensitive to these adversities as domesticity has made them fragile. Already, pastures are often infested with useless and even harmful plants. The animals frequently refuse to eat them, which unfortunately favors their proliferation, if we do not take the trouble to eliminate them. This operation is also difficult, because the bad plants are perennial and often woody. Plugs are even more dreadful. We think of carnivores, and we know the ravages that wolves and foxes committed and still commit each year. Finally, cattle are victims of many insects, which, in addition, transmit microbial diseases. Flies, horseflies and mosquitoes harass the animals and suck their blood.

### ***3.10 Unemployment rate***

Here again is a problem that handicaps the development of livestock farming in the DRC. The National Agency for the Promotion of Investments sets the average incidence of poverty at 80% and the unemployment rate at 84% for the Democratic Republic of Congo [14]. This situation constitutes a real problem, which is also at the

center of the blockage and therefore cannot allow citizens to undertake breeding initiatives. However, the economic importance of goats in the Iturian tropical environment for the most disadvantaged populations has been demonstrated; it plays a major role in the survival of households, particularly for self-consumption, to meet certain household expenses and for certain customary rites (marriage, mourning, baptism, etc.) [15]. The goat can play a crucial role in the fight against unemployment and poverty.

#### 4. Conclusion

Livestock production is handicapped by several factors listed in the text, in particular the low salary of central administration staff, the lack of interdependence between agriculture and livestock, the problem of evacuation of agricultural products, lack of science in animal production, slow and costly research on animals, ... are the main factors that block animal production in the Democratic Republic of Congo. The improvement of these various factors will allow the improvement of the animal production system in the Democratic Republic of Congo.

#### References

- [1] Musalizi, R.-L. 2018, Caractérisation de performances zootechniques des chèvres (*Capra hircus* Linné, 1758) indigènes de la province de l'Ituri et leur contribution à l'amélioration des conditions socio-économiques des éleveurs. Thèse de doctorat dans les Annales de l'Université de Kisangani.
- [2] Dehoux, J.P, 2010, Zootechnie et parcours tropicaux. Anales de l'Université Catholique de Louvain. 334p.
- [3] Vernier, A., 1963, Les facteurs qui gênent les exploitations agricoles. Opinions des agriculteurs sur leur propre exploitation d'après une enquête effectuée en 1962. Economie et Statistique Année 1963 18-3 pp. 227-236.
- [4] Plagnol, H., 2021, Facteur limitant. Les éditos d'Agra Presse Hebdo. <http://www.agra.fr/facteur-limitant-art419375-2524-321.html>
- [5] Anonymous, 2009, Deuxième rapport National sur l'état des ressources phytogénétiques pour l'alimentation et l'Agriculture, République Démocratique du Congo. P66.
- [6] Musalizi R.-L., 2015, Agrostologie et Cultures fourragères. Cours inédit, Troisième Graduat. Annales de l'Institut Supérieur Pédagogique de Bunia – ISP-BUNIA. 67p.
- [7] De Didem T., 2017, La RDC peut-elle devenir le grenier de l'Afrique ? National Geography-Environnement. <https://www.nationalgeographic.fr/environnement/2017/11/senegal-lenjeu-de-lautosuffisance-alimentaire>.
- [8] Anonymous, 2023, Données mondiales, Afrique. <https://www.donneesmondiales.com/afrique/congo-kinshasa/economie.php>.



- [9] DUGUÉ P., 2000, Fertilité et relations agriculture-élevage en zone de savane. Actes de l'atelier sur les flux de biomasse et la gestion de la fertilité à l'échelle des terroirs. Cirad, 5-6 mai 1998. Cirad, Montpellier France, Colloques, 200 p.
- [10] FAO, 2005. Science et production animale. Food and Agriculture Organization of the United Nations. <http://www.mondialisations.org/php/public/art.php?id=22864&lan=FR>
- [11] EFSA, 2023, Nouvelles avancées en biotechnologie. <https://www.efsa.europa.eu/fr/topics/topic/new-advances-biotechnology>.
- [12] Nyongombe N., 2007, Zootechnie générale. Anales de l'Institut Facultaires des Sciences Agronomiques de Yangambi. Cours inédit. 151p.
- [13] Musalizi R.-L., Lokinda L., Nyongombe U., Londjiringa D., Mananu K., Mulume J, Muliri L., Mukandama N., Adjule A., 2018a, Brief theoretical overview of the goat (*Capra hircus* L. 1758) indigenous of Ituri in the Democratic Republic of Congo and of Africa. American Academic Scientific Research Journal for Engineering, Technology, and Sciences, 2018, vol. 44, no 1, p. 209-230.
- [14] ANAPI, 2020, Situation économique et sociale de la RDC. Ministère du Plan, Agence Nationale pour la Promotion des Investissements. <https://www.investindrc.cd/fr/Situation-economique-et-sociale-de-la-RDC#>
- [15] Musalizi R.-L., Mukandama J.P, Muliri B.L., Kasamba D., Motoba H., 2018b. Characterization of the Socio-economic Impact of Goat Rearing (*Capra hircus* L., 1758) in Peri-urban Pastoralists. Empirical Analysis Carried Out in the Natural Conditions of the Ituri Province. American Scientific Research Journal for Engineering, Technology, and Sciences (ASRJETS), 41(1), 146-161.
- [16] Millikan, F. et Hapgood, D., 1970, La moisson difficiles : Problèmes agricoles du tiers monde. Edition Tendances actuelles. Presses des Etablissements Dalex MONTRouGE (92).
- [17] Mukandama JP., 2019, Statistiques appliquées en Aménagements des Ecosystèmes. Anale de la Faculté de Gestion des Ressources Naturelles Renouvelables. Cours inédits à l'Université de Kisangani.