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Technical Note

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Commercial livestock mobility between the Sahel and coastal countries: the future of cattle trading on-the-hoof

©Gilles Coulon / On the route to Ghana, 3 km from the border, next to Mango, Togo
February 23, 2016

Summar

This article focuses on the issues of transportation of cattle by foot from countries in the Sahel to coastal countries, over long distances. Faced with increasingly constraining mobility conditions during the descent to the south, this traditional method to ship beef towards the coast is called into question by policies that compare it to the speed of transportation of live animals by truck and, for the last few years, the interest has even focused on the shipping of meat in refrigerated trucks.

However, despite the multiple obstacles it must overcome, transportation by foot remains a dynamic practice, as it is very efficient at the zootechnical and economic levels. Focusing on herds of animals that are still young, this type of transportation in fact allows them to complete their growth and fattening along the way. As an alternative, transportation capacity by road remains limited by the conditions of the infrastructure and the low availability of trucks. This results in high transportation costs that must also include additional costs related to harassment on the road.

The attention paid by national and subregional institutions to the future problems of livestock transportation by foot between the Sahel and the coast will, therefore, be a determining factor in the future of Sahelian meat competitiveness within a context of a sharp rise in urban demand, the weak purchasing power of consumers and competition from other sources of animal protein (fish, chicken, imported red meat).

©Gilles Coulon / Livestock market in Fada N'Gourma, Burkina-Faso. February 14, 2016

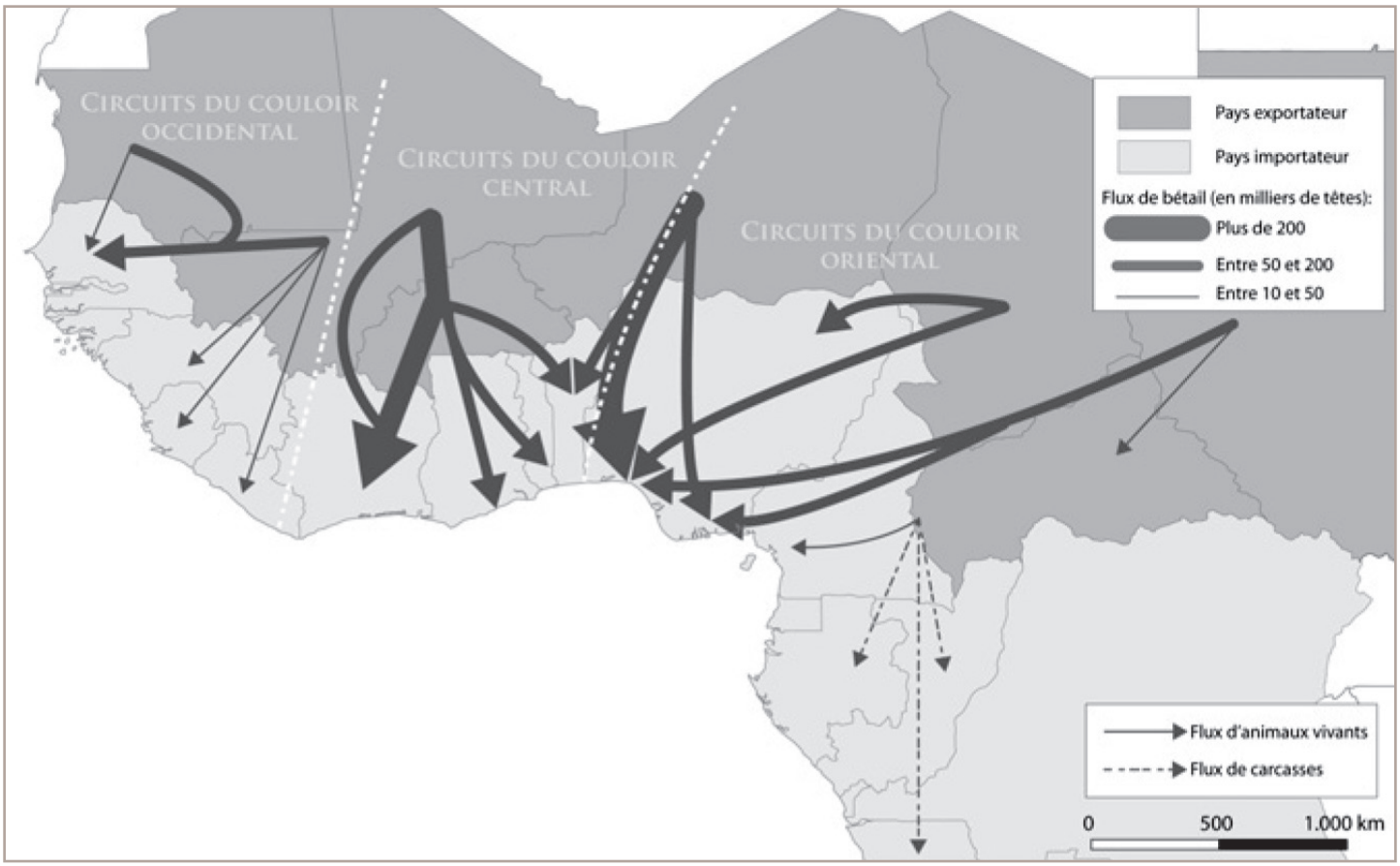
Introduction

The shipment of livestock from the Sahel towards the coast follows an ancient practice deeply anchored on the natural complementarity of exchanges between the semi-arid areas in the north and the agricultural areas in the south. On the axis connecting central Niger to Nigeria, Baier (1980) dates livestock trade by foot to several centuries before colonial occupation and highlights the considerable increase in Nigerian livestock exports between 1900 and 1930, as a response to the improvement in living standards of cocoa and palm oil producers and urban expansion in Lagos and Ibadan. Across the Sahel, Boutrais (2001) notes that, in the colonial era, livestock traders very often took the routes of the slave trade, in response to the economic development of the Atlantic regions. Bonte (1969: 168) underlines the adventurous nature of this trade at the beginning of the 20th century. On the Mali-Nigeria axis, caravans were armed to avoid rezzous and the theft of livestock. Since independence, major circuits were secured, reinforced and adapted (Ancey 1996; Botte 1999; Quarles 1999). Markets were organized under the influence of the colonial administration, which took an interest in infrastructures, market price systems and livestock corridors (Boutrais 2001). Broker intermediaries guaranteed operations and facilitated buying and selling operations (Bonte 1969: 165-169) Today, due to its antiquity, commercial livestock mobility involves a multitude of actors often working in networks and always operating on axes generally oriented north to south and, in certain cases (such as Benin-Nigeria), east-west branches (map 1).

Even though these trade flows are not new, their context has changed deeply, especially over the last 50 years. Population growth has resulted in an overall increase in the demand for beef (Pica-Ciamarra 2009). It is estimated to grow over 30% by 2030 in West Africa (OECD 2008: 24)[1]. The decline of trypanosomiasis in the Sudanese area and pastoral migrations due to long droughts have led to the long-term implementation of husbandry systems in coastal countries, namely in northern Benin, Togo, Ghana and Côte d'Ivoire. At the same time, the proportion of imported meat in the supply of coastal countries has emerged, within the context of opening to worldwide markets and the growing share taken by Latin America, in particular Brazil.

1 Working under the assumption of (i) a population growth of 2.0 to 2.5% per year and (ii) stable per-capita consumption of beef.

Thus, the livestock industry must now respond to a dual need: to provide more meat (more livestock, heavier livestock) to meet the noticeably growing demand on the coast and to improve its competitiveness over local and imported production. Under these conditions, the method to transport animals to the end markets becomes of crucial importance, due to its direct impact on the final cost to consumers and, more globally, the operation of systems to bring livestock to the market. However, transportation by foot is currently perceived as archaic, conflictive and having a dark future, despite dissenting voices that insist on its economic efficiency and flexibility (Williams 2003; OCDE 2008: xvii; Renard 2009). Its critics most often cite the speed of livestock transportation by truck, which bypasses the difficulties of transportation by foot and allows for shipping heavy animals (cattle for fattening) that cannot withstand the walk. Promoting transportation by foot would be a rearguard action, the result of a backward-looking and unalterable perception of the livestock sector. But is it possible to do without it? Is it possible to transport over a million heads of cattle to the coastal capitals exclusively by truck today (Guibert et al 2009: 28), and even more tomorrow? In the end, what is the future, what is the interest itself, of transportation by foot as part of subregional exchanges subject to significant commercial changes? We will respond to this question based on, first of all, a specific example of the cross-border movement of cattle between northern Burkina Faso and the cities of Cotonou in Benin and Lagos in Nigeria. The discussion will then be expanded to all of West Africa.



Map 1. Trade routes in West and Central Africa (Cesaro 2010: 19).

Methodology

Among the routes used to transport cattle from the Sahel to the coastal cities, transportation from northern Burkina Faso is one of the most fascinating to examine. Animals go on a long journey and have to cross several borders. Thus, northern Benin is often nothing other than a transit area for Burkinabé cattle intended for the Nigerian market. An analysis of this route therefore allows for Nigeria to be taken into account, a heavyweight in demographic and economic terms, and the driver of international livestock trade in West Africa.

The study was carried out as part of the Support Project for Livestock Herding Productivity (PAPE) in Mali, Burkina Faso and northern Benin. This project, funded by the European Union in 2010-11, specifically led to the design of a moderation and training module on Livestock Trade in West Africa (Thébaud and Corniaux 2011)[2]. We have used this work as a reference.

Surveys through interviews and document-gathering were carried out with actors involved in the entire livestock trade sector. Three series of interviews were carried out in March 2010, November 2010 and January 2011. The first series was carried out during a mission on the ground were the authors met, among others, livestock farmers, traders, transporters, carriers, managers of livestock markets, directors of slaughterhouses, wholesale butchers and retailers between Fada N'Gourma, in eastern Burkina Faso, and Prakou, in northern Benin (map 2). Two other series of interviews were carried out as part of training and moderation workshops on livestock trade in West Africa, bringing together a panel of actors in the sector in order to complete the data, identify potential solutions in the strategies over the year and test the initial research hypotheses. These workshops were held first in Natitingou (northern Benin) and then in Bamako, Mali.

The interview matrixes namely covered the history of trade circuits, the operation of market networks, the obstacles to mobility, the infrastructures in place, the segmentation of markets, the evolution of volumes and prices over a north-south axis, the role of devolved authorities and the representation, by actors, of the benefits and inconveniences of the different forms of transportation (by foot, live by truck, refrigerated or frozen meat by truck).
Specific work was also carried out with about a dozen professionals in the industry (fatteners, exporters by foot, exporters by truck, butchers) to establish, at each commercial stage, the average prices and weights of the two main categories of livestock intended for the coastal markets: young males transported by foot and fattened adult males transported by truck. The margins of operators were also estimated. The results were obtained on the basis of a faithful reconstruction of a typical route between the production area in the Sahel and the market in a coastal capital. The reliability of the data is based on the extensive experience of our contacts and, consequently, the consistency of their responses.

These interviews, conducted by the authors of the article, were supplemented by the use of the work carried out by the PAPE project team. There are two types:

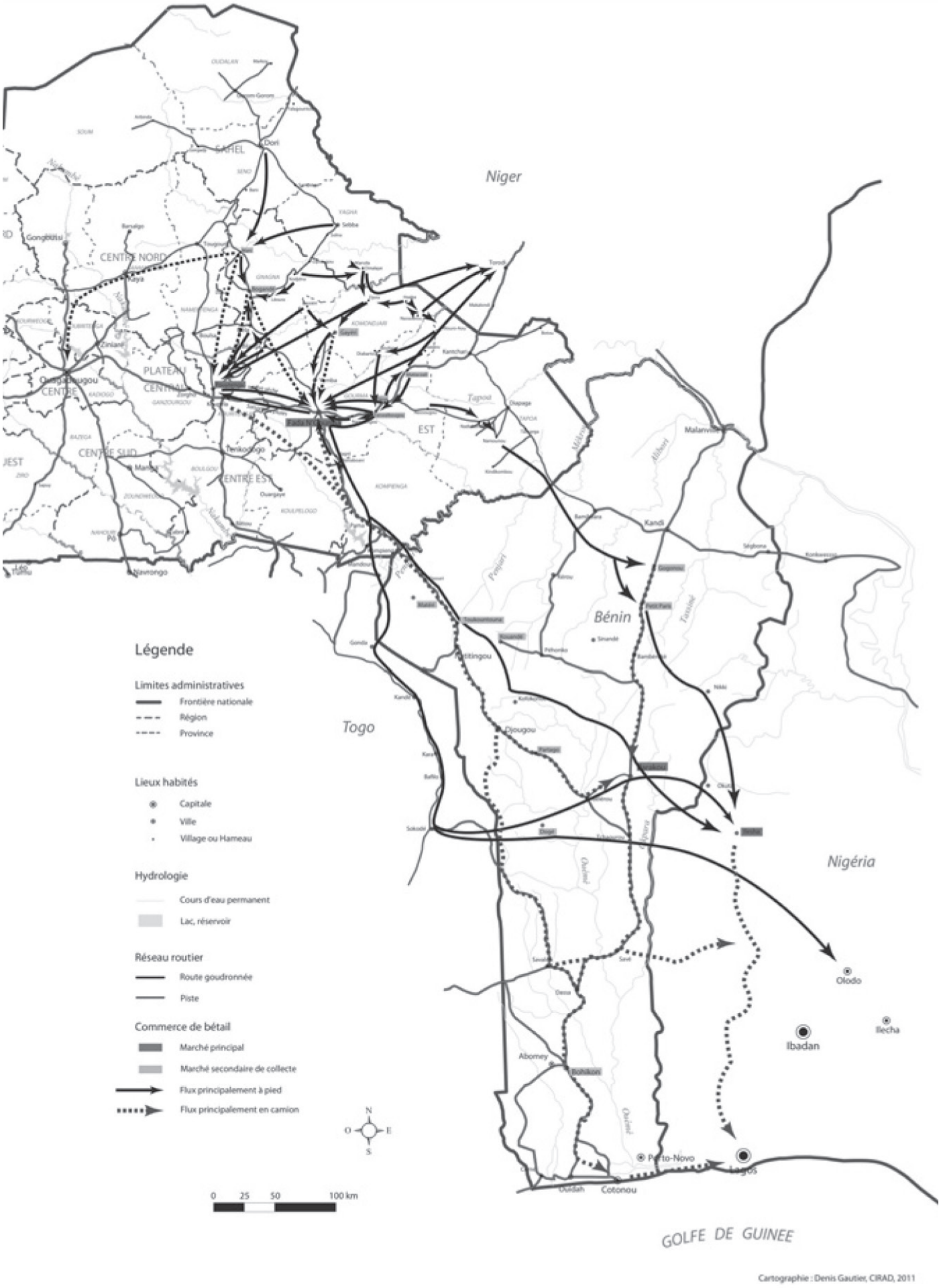
- The first round was carried out on the flows of livestock marketed between northern Burkina Faso and the coastal cities of Cotonou (Benin) and Lagos (Nigeria), on the one hand upstream from the end market of Fada N'Gourma in Burkina Faso (Gautier 2011) and, on the other hand, downstream from this market, to the consumer market of Cotonou in Benin (Achade 2011).

- The second round was carried out with partners[3] of the PAPE project in charge of implementing or developing infrastructures (livestock corridors and markets) throughout the axis connecting eastern Burkina Faso to northern Benin.

The interest in transportation by foot as well as the limiting factors are analyzed in light of these works based on two major axes: the geography of livestock trade circuits and the comparative advantages of the different methods to transport meat.

2 This module, which is intended for a wide audience, was designed to help actors involved in the production and marketing of livestock to reflect on the issues raised, debate them and make informed decisions

3 These were RECOPA in Burkina Faso and SNV in Benin.



Map 2. Livestock transportation circuit in northern Burkina Faso towards Cotonou and Lagos

Findings

1. The Practice of Transportation by Foot

Livestock transportation by foot is a real profession, which is demanding. Livestock traders most often recruit their transporters from communities strongly anchored to the practice of livestock herding and maintain their loyalty, sometimes over long periods. On the Fada-Parakou axis, the Burkinabé transporters encountered by the authors emphasized the multiple difficulties to be solved on the route. Crossing the border and classified areas (wildlife reserves, forests) is always critical. Incursions into crossed land are frequent and necessary to provide water for the animals and access pastureland or agricultural byproducts. Conflicts with local communities are thus common and their settlement is costly. With decentralization, the transit taxes collected by the authorities tend to multiply.

The organization of transportation is rigorous, with a lead herder in charge of obtaining food supplies and prospecting watering places and pastureland. A budget is estimated and advance payments are provided for salaries, livestock healthcare needs and taxes. A salary is paid for each month of transportation and almost daily contact is maintained with the trader, thanks to mobile phones.

Transportation by foot is therefore reliant on pastoral management of herds, representing true commercial transhumance, from which the animals will not return.

2. Transportation Circuits

Like other major West African transportation circuits, livestock trade from northern Burkina Faso takes place over long distances (map 2), up to 800 km between Dori (Burkinese Sahel) and Lagos. However, not all the animals transported towards coastal cities are native to the Sahel region. Some are produced in the Sudanese area south of Burkina Faso or northern Benin. This dynamic, which is the result of both the development of agriculture (plough oxen) and the progressive settlement of livestock farmers from the Sahel in Sudanese areas, is strong and currently requires the creation or development of livestock markets connected by livestock corridors in northern Benin. Map 2 illustrates the complexity of this trade, which is based on a network of scattered markets that are strongly intertwined (consistent organization of market days according to the distances to be travelled). Small weekly harvest markets form a funnel up to the end market of Fada N'Gourma, where animals are assigned every Sunday to be shipped towards urban consumer markets. Most cattle are taken by foot up to the market of Fada N'Gourma. Certain bushland markets in Burkina Faso (Mani, Bogandé, Gayéri) are, however, equipped with a loading bay that allows for truck transportation of fattened males unable to walk long distances. They will also by taken by trucks to the coastal consumer markets, in particular to Lagos via Savé.

Other animals are transported by foot to northern Benin. Some are resold on site (plough oxen, cows with calves, heifers for further breeding) and will end up, a few years later, after reforming, on these same markets, this time for slaughtering. Some of them are equipped with a loading bay, such as Gogounou and Toukountouna. In fact, trucks allow for bypassing agricultural and urban areas, increasingly dense as they move to the south[4]. However, routes by foot persist. In particular, they include a Gogonou-Ilesha axis and a Toukountouna-Parakou-Ilesha axis. In other words, beyond Parakou in Benin and Ilesha in Nigeria, all animals are transported by truck.

Therefore, we can observe complementarity among the different methods of transportation. Today, no animal is transported on cross-border circuits without a phase of transportation by foot or a phase of transportation by truck. Ultimately, the use of trucks as a method to transport animals arises as a dual response to the evolution of demand for fattening animals, which are not very resistant to walking, but also to the increasing need to facilitate the final stages of transportation by foot.

4 Trucks also allow for avoiding rambling in national parks, numerous in northern Benin, and lake areas, which are frequent upstream from Cotonou.

3. A Comparative Approach to Transportation Modes

The export sector essentially covers heavy, robust animals. Reformed cows and calves are not[5] part of this type of transactions. The market is interested in bull calves aged two to four years, growing or just after the growth phase, or reformed adult males, often before the age of eight years, as breeding stock or plough oxen. Therefore, the export sector covers two very distinct categories of animals (table 1): bull calves able to walk (possibility to transport them by foot) and fattened adult males, too heavy to walk over long distances (need for transportation by truck).

Over the course of a relatively brief period of around three months, adult males are in fact fattened to arrive in the market in appropriate conditions. This fattening, called "finishing" is usually done with grass and sometimes uses troughs with fodder supplementation. This finishing is carried out as close as possible to a loading bay as animals fattened with troughs are incapable of moving more than about ten kilometers. They are transported by truck in batches of 35 to 40, depending on the size of the trailer and the size of cattle. Transportation takes place in less than twenty-four hours from loading to unloading in Cotonou or Lagos.

However, bull calves are able to walk for a long time over long distances. This quality is used to transport the animals by foot towards secondary or terminal markets. Not all young males are intended for slaughter. Some are bought in intermediate markets, become breeding stock or plough oxen, and will eventually be included, a few years later, in the lots intended for coastal consumers.

If they are not sold during transportation, bull calves, which are not done growing, will be slaughtered during the journey, over several months. For instance, transportation by foot from Fada N'Gourma to Ilesha is organized over six months, departing during the cold dry season, after the harvest, so as to take advantage of agropastoralist resources while limiting the risks of going off the path. Furthermore, convoys, which bring together about one hundred and thirty heads, can take advantage of the grass following early rain in the fields of southern Benin. Over the course of this trip, the animals will also gain several dozen kg (table 1). This is indeed the main interest of transportation by foot.
The end of the journey now takes place by truck. Today, the influence of agriculture and, in particular, urbanization, makes it impossible to transport these animals by foot over this last section.

We have no reliable statistics on the significance or dynamics of these two modes of transportation. They are also difficult to obtain, taking into account their intricate connection. Furthermore, there may be confusion between annual cross-border transhumance, re-breeding and production from the Sudanese area. Within the context of exchanges between southern Burkina Faso and northern Benin, we can roughly assess flows at 80 to 120 heads of livestock, half of which are transported by foot (Achade 2011).

5 The presence of cows of certain large breeds such are Bororo can be noted between Niger and Nigeria. This is the case of animals reformed for infertility (Krätli 2007: 162–167).

4. Competitiveness of Transportation by Foot

On the West African beef markets, price variation is strongly regulated. The lower limit is imposed by the interest of the activity and the profitability of trade. The upper limit is established by the low purchasing power of the population and fierce competition from chicken and fish, which are cheap and anchored in the food habits of coastal urban populations. Despite the variability of production conditions in the Sahel and, consequently, that of prices in livestock markets, consumer prices vary very little over the course of the year and from one year to the next. They are small[6], in the order of FCFA 2,000 to 2,200 per kg for bone-in and FCFA 2,400 to 2,500 for boneless.

This price constraint in consumer markets imposes extremely low margins on beef sector operators. Renard (2009) estimates them at less than 10% in Burkina Faso. We have confirmed this finding. The ratio between consumer prices and those paid by producers is of 1.9 for transportation by foot and 2.0 for transportation by truck (table 1) compared to 8 to 10 in Europe (OECD 2008: 58), where the number of operators involved in the sector is lower.

6 Only offal (liver, heart, lungs) and tenderloin are better valued in specific niches.

Main steps	3-year-old bull calf		6-year-old ox	
	Live weight	Price (in FCFA)	Live weight	Price (in FCFA)
Departure from the livestock farmer (100 km north of Fada)	180 kg	F 135,000	295 kg	F 234,000
Mode of transportation	By foot		By foot	
Duration of transportation	1 to 2 weeks (*)		1 to 2 weeks (*)	
Arrival in the end market of Fada N'Gourma	180 kg	F 150,000	295 kg	F 250,000
Mode of transportation	By foot		By truck	
Duration of transportation	3 months (**)		1 day (***)	
Size of the lot transported	130 cattle		40 cattle	
Arrival at the end market of Cotonou	220 kg	F 235,000	345 kg	F 445,000
Resale to retail butchers in Cotonou	110 kg (****)	F 260,000	200 kg (****)	F 468,000
Facteur de multiplication (prix arrivée/prix départ)	1.9		2.0	

(*) through two secondary markets, common lots of a few units to a few dozen heads. (**) end of transportation by truck from Parakou (Benin) for half a day
(***) after fattening with troughs in Fada for 3 months
(****) estimated carcass weight, with a slightly higher yield in the case of 6-year-old oxen, according to the estimates of operators.

Table 1. Price and weight of two categories of livestock according to the type of transportation: case of the axis between northern Burkina Faso and Cotonou (according to Thébaud and Corniaux, 2011).

We already know the efficiency of the sector. Here we affirm the economic interest of transportation by foot. Certainly, this method of transportation is long (several months), often risky (theft, disease, injured animals) and faces increasingly compromised mobility as well as growing taxation for crossing territories. But it allows for transporting, in one trip, over 120 cattle –in short, the equivalent of three trucks– that grow along the way. Furthermore, transporters are able to wait a few weeks when prices are considered too low on arrival. This wait is impossible with transportation by truck, which may encounter problems with market congestion, taking into account the number of supply areas. However, the main motivation of exporters is, without a doubt, the profit margin per head. While it is relatively similar and low for most operators[7], it is estimated at FCFA 19,500 compared to FCFA 13,000, respectively, for transportation by foot and by truck (table 2).

7 The Dyulas and butchers perform transactions on smaller lots than exporters.

Operators	3-year-old bull calf	6-year-old ox
	(export by foot)	(export by truck)
Livestock trader (from the producer to the end market of Fada N›Gourma)	NA	FCFA 9,000
Exporter (from the Fada market to the wholesale butcher of Cotonou)	FCFA 19,500	FCFA 13,000
Wholesale butcher and retail butcher in Cotonou (single market to share between them)	FCFA 13,000	FCFA 12,000

Table 2. Margins of operators (in FCFA per head) according to the category of animals and the method of transportion for export (according to Thébaud and Corniaux 2011: 17).

In other words, exporters earn more per head, even cheaper for purchase (table 1) when it is transported by foot. This higher profit margin should be considered fair compensation for the risks incurred and the immobilization of capital over several months, which allows for little rotation over the course of one year.

Discussions within the West African Context

Overall, in 2011, West Africa was self-sufficient in terms of beef. With the noteworthy exception of Côte d'Ivoire, which imported close to 0% of its consumption of meat and offal (Sidibe 200), coastal countries continue to cover most of their national production deficits with imports from the Sahel. Thus, over one million cattle are transported each year towards the coastal capitals (Guibert 2009 2). Nigeria, itself a significant producer, covers about half. Sahelian countries (Mauritania, Mali, Niger, Burkina Faso) export between 150 and 300,000 heads per year. Taking a low base price of FCFA 250,000 per head (table 1), this trade represents an annual turnover of at least FCFA 250 billion[8]. Therefore, the issue of transportation by truck or by foot, in terms of jobs, income and food sovereignty is significant. Even though it seems essential to maintain these cross-border movements, which transportation method should be preferred?

8 I.e. 550 million US dollars (exchange rate on June 1, 2011).

1. The Logistics in Question

In a region of the world quick to promote modernizing options (Ancey and Monas 2005), road transportation is often considered the only future solution on the matter of livestock transportation. To the best of their ability, political leaders have been trying to develop paved or useable roads to facilitate trade in the subregion. ECOWAS clearly shows this desire (OECD 2008: 115). However, rather than opposing them, we have seen in our case study that it would be more appropriate to take advantage of the complementary nature of transportation methods, which is indeed an important factor in the efficiency of the sector, and which operators have otherwise perfectly integrated into their practices and strategies. Combined shipping is a constant in all large West African circuits. Before getting into a truck, the animals move by foot to the end markets or the border. For instance, in the Mali-Senegal axis, they are loaded according to opportunities and the weight of animals in Dahra, in the Senegalese Ferlo, in Diboli on the border or in the Malian markets of Kayes, Nara or Bamako (Gautier et al, 2009). In the Burkina Faso-Ghana axis, animals may be transported by foot up to Bittou, a border town (Okike 2004). The massive influx of mobile phones and bank branches throughout the entire route over the last few years has facilitated this collaboration. Today, it is very simple for an exporter to follow a herd, contact intermediaries, obtain information about prices and withdraw money, while limiting his own travel.

Of course, with the development of road infrastructure, the growing export of heavy animals unfit for walking and the implementation of livestock markets with a loading bay, transportation towards the coastal markets by foot has declined over the last thirty years. Trucks are even necessary to cross the 100 or 200 last kilometers north of large coastal capitals. Urbanization, the density of road traffic and livestock corridors, the presence of many lake or flood-prone areas and the disappearance of pastureland now make it impossible to complete the trip to Abidjan, Lomé, Cotonou or Lagos entirely by foot. In 2010, only the circuit serving Accra in Ghana was still operational.

However, transportation by truck also has its limits. The road network is often degraded and there are many accidents. The vehicles themselves are old and not specifically equipped to transport livestock. These are trucks that take, on the outbound trip, several types of goods, loaded in port cities, destined to Sahelian countries and, on the return trip, load cattle to avoid returning empty and monetize the journey. Thus, especially following the cotton harvest in Mali and Burkina Faso, it is difficult and expensive to rent a truck to load a lot of cattle. With the demand from coastal countries changing little from one season to the next, logistics become insufficient for three to four months of the year. Therefore, with prospects of growth in the international trade of beef, it is unreliable to envisage transportation exclusively by truck in the short term[9]. Furthermore, road transportation remains expensive. A study carried out in the Mali-Côte d'Ivoire and Burkina Faso-Ghana axes (Okiké et al. 2004) showed that the cost of trucks and maintenance could represent up to half the cost of international shipping, with cross-border costs (taxes) representing about 30% of this cost and illegal taxation between 6 and 10%. The cost of road transportation must in fact integrate diverse payments due to "road and administrative harassment". These additional costs are often in contradiction with the free movement of goods and persons instituted across the ECOWAS area and their impact is regularly documented by the Observatory of Anomalous Practices (OPA) implemented by ECOWAS and WAEMU in 2005.

9 Considering also animals transported to the Sahelian capitals.

As an alternative, rail transportation can only be considered for a few axes, such as Bobo-Dioulasso (Burkina Faso) – Abidjan. But the political instability of Côte d'Ivoire pushes actors in the sector to remain very prudent. On the Bamako-Dakar axis, the journey by train is too unreliable due to recurring breakdowns and its crippling duration (2 to 3 days).

Finally, at a moment that new construction or rehabilitation projects for slaughterhouses in Sahelian countries are seeing the light (Niamey in Niger and Ouagadougou in Burkina Faso), it should be noted that the transportation of refrigerated or frozen meat will do nothing to solve the problems of transportation by truck. On the contrary, the shipping and handling costs (slaughtering) will be revised upwards (refrigerated trucks are expensive to buy and maintain).

Further work will be required in the future to identify, on the one hand, the magnitude and dynamics of the demand for trucks and assess, on the other hand, the appropriateness of a more adapted transportation system (animal trucks). However, it seems unrealistic, under the current conditions (lack of adapted trailers, competition from cotton during the cold season, lack of loading bays) to consider that shipping can be done exclusively by truck. Transportation by foot, from end markets to coastal capitals, therefore remains – and, without a doubt, will remain for a long time– a vital shipping method with a financial efficiency that should no longer need to be demonstrated.

2. Transportation by Foot or How to Produce Beef while Walking

Truth be told, if transportation by foot were only a matter of logistics, exporters and carriers would, without a doubt, have found the means to adapt to it. The former would even have reduced their profit margins to ensure year-round transportation, at the risk of further compromising their activity. The latter would maybe have acquired other vehicles, assuming that port activities would grow at the same time (avoiding empty trips).

However, transportation by foot, unlike transportation by truck, does not only serve a shipping function. This transportation method reintroduces a production process. Most of them having a background as livestock farmers, transporters become herders (Boutrais 2001) and, thanks to pastoral behavior, the transported animals will be fattened along the way. A higher profit per head for this transportation method is explained, as we have seen, by taking additional risks, by a longer duration of transportation compared to transportation by truck and by the costs incurred (e.g.: community taxes, payment for water). However, it is also the result of grass finishing that needs to be paid.

Transportation by foot thus allows for producing more meat by spreading the load between production areas in the Sahel and the coastal countries, with the latter providing the finishing of animals in their territories. Such a role distribution is also not unlike the policies of "stratification" adopted in the 1970s and 1980s by several Sahelian countries such as Senegal (with the SODESP[10]) or Niger (with the PDENCE[11]). They were designed to make pastoral husbandry part of the overall economy of the Sahel, with specialization of the space. Pastoral areas would produce calves, supplying the intermediate area with young animals which would be reared there, while agricultural areas would supply fattening and finishing for animals close to ranches or farming operations using byproducts from their crops (Bernus 1990). Having been well documented (Touré 1997; Thébaud 2001), the very mixed results of these policies showed, among other things, their limits in confining such a stratification within Sahelian countries: southern regions find it difficult to assume the finishing of livestock due to the limited availability of agricultural byproducts and the needs of their own livestock.

Ultimately, the recognition of the actual role of cross-border transportation by foot would introduce a significant correction in the history of pastoral development strategies in the Sahel and show the interest in providing the finishing for part of the livestock from the Sahel in the coastal countries themselves. Such a task distribution is also a necessity. In fact, with the "all truck" option, how would it be possible to produce in the north what is currently produced in the south during transportation? In the current status of the race for land (advancement of agriculture to the detriment of pastoral rangeland), of crisis in large agricultural industries providing fodder supplements (peanut in Senegal, cotton in Mali and Burkina Faso, rice throughout the entire Sahelian band) and the absence of national of regional policies clearly favoring feeding herds, it is the least risky scenario to consider that it will be easily possible to produce at least 30% more meat in the Sahel to respond to the demand of coastal countries over the next twenty years. In other words, it is urgent to rehabilitate transportation by foot, especially in its cross-border dimension.

10 Society for the Development of Animal Husbandry in the Forest-Pastoral Area.

11 Development Project for Animal Husbandry in East-Central Niger (World Bank).

3. A question of equity

Transportation by foot takes place for the mutual benefit of exporting countries in the Sahel and coastal importers. The former enhance their animals during the final stage without an excessive impact on their pastoral resources (water and fodder) thanks to the constant mobility of the numbers shipped, which allows for spreading animal loads and preserving the environment. The latter, for their part, cheaply acquire animals reared in the north, which only use their resources over a short period for strategic gains in meat, for the exclusive use of coastal consumers. We should remember that finishing animals is also a source of revenue for the State and communities, through the local taxation of pastoral resources and infrastructures. This point of view should be shared with all the actors involved, so as to firmly defend the role of transportation by foot in the decades to come, as this shipment method allows for diversifying and completing the overall production mechanism of red meat at the subregional level, following the proactive policies implemented by certain coastal countries in the past. For example, this was the case of the Society for the Development of Animal Production (SODEPRA) created by the government of Côte d'Ivoire in 1970, with the goal, among other things, of establishing communities of migrant Malian and Burkinabe livestock farmers in the regions of Bouaké and Korogho (Diallo 1995).

An equitable vision of the workloads of animal production between the Sahel and the Coast would also require a different examination of the implementation of taxation on animal husbandry on both sides of borders. In fact, the marketing of livestock is a significant source of revenue for States (taxes on imports and exports) and local authorities, the competences of which affect livestock markets, corridors and watering places. Therefore, it is urgent to reconsider the predatory action of local authorities throughout the transportation route, which, in the end, only serves to compromise the competitiveness and efficiency of the sector as a whole. The taxes received should correspond to the supply of actual services by livestock farmers and transporters: maintenance of the equipment of livestock markets, marking of livestock corridors, access to water, implementation of rest areas in the outskirts of towns and markets, preservation and management of pastureland and water resources, etc. At the level of the affected transportation circuits, an inter-community dialogue is also an absolute necessity from the perspective of making tax practices consistent on the basis of a comprehensive understanding of the way livestock production and trade operate. The potential role of inter-community organizations in the management of the sector at the level of cross-border regions and territories must be valued and the provisions provided by law further put to good use. Beyond the areas strictly related to taxation, the capacity of decentralized communities to influence the future of the industry is still full and their position in the future remains crucial to all questions related to pastoral mobility, conflict resolution and the implementation of conditions favorable to the development of the sector.

Conclusion

Small side looking towards the bushland,
small side looking towards the village
(Fula proverb, Bonfiglioli A.M. 1990)

Does transportation by foot have an interest and even a future in West Africa? That was our initial question. We have shown that this transportation method, despite the difficulties encountered, allows for shipping young bull calves from the Sahel to the coastal capitals at a lower cost. Mastered by herders, its production function (fattening of growing animals on pastureland) is decisive. However, the gradual closure of the space, following population growth and the expansion of agriculture, imposes increasingly burdensome constraints on both the production and shipping of livestock. Urbanization in the south even prevents the movement of large herds less than one hundred kilometers from Lagos, Cotonou or Abidjan. Transportation by truck is needed. Indeed, it is necessary for transporting heavy animals fattened in the north, which are especially popular in consumer markets.

However, transportation by foot has a real future. We have shown how it complements transportation by truck, upstream and downstream, according to the characteristics of the animals transported. Faced with the challenge of coastal urban demand, this mode of transportation could also establish itself beyond this complementary nature. In fact, in order to continue to supply coastal markets, the West African sector must either produce heavier animals in the north, which must be fed exclusively in the north, and transport them by truck, or produce more young animals in the north and fatten them on the way to the south, through transportation by foot. Pastoral resources are scarce in the north, however, which makes it necessary to use the resources of coastal countries, in particular during transhumance. In other words, the current situation requires a comprehensive reflection of the sharing of these resources at different levels (cross-border, national, inter-community, etc.). Decentralized authorities and public policies will play a decisive role. Their vision of commercial mobility and pastoral mobility should be reconsidered quickly, as they are inseparable and encourage more and more livestock farmers and traders to join together in its advocacy. The financial windfall that the sector represents for communities and States is certainly at stake here. But it is also and in particular a question of the entire future of the West African beef sector. In a context of a sharp rise in urban demand, the weak purchasing power of consumers and competition from outside Africa (in particular from Latin America) and faced with competition from chicken (imported or local) and fish, the maintenance or improvement of mobility over large commercial axes is an essential component of its competitiveness which should, ultimately, be appreciated for its true value.

In the same way as the movements of Sahelian herders between the north and the south of the Sahel base their legitimacy on highlighting the environmental complementarity and the mutual economic interests of these regions, the key to livestock trade in West Africa thus resides in the necessary sharing of production and marketing tasks between the Sahel and the coast. The declared will of West African countries to make the livestock and meat sector a privileged instrument in subregional integration thus requires adopting effective trade policies that highlight the respective advantages of the countries (Sidibe 2001). The maintenance and development of portions of the coastal meat market by producing regions risk depending largely on the frequency of commercial flows and the capacity of the sector to become increasingly competitive. In this context, far from being an obsolete practice doomed to disappearance, transportation of livestock by foot towards the coast should attract everyone's attention.

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English abstract

This paper debates the future of long-distance commercial trekking of cattle, from Sahelian countries to the terminal markets on the coast. In the general context of shrinking access to pastoral resources, and constraints affecting livestock mobility throughout West Africa, this time-honoured form of export is being called into question by national governments and local authorities. Road transport of live animals and the reintroduction of refrigerated-meat value-chains are increasingly being proposed as better alternatives. Based on field research conducted within the framework of an EU funded regional programme, the authors challenge this vision and conclude that trading cattle on the hoof retains optimal levels of efficiency, especially in the trade of young animals as they actually gain weight 'for free' during the deliberately slow-paced journey which L'avenir du convoyage à pied may last several months. In comparison, road transport remains heavily constrained by poor infrastructure, limited availability of vehicles and high transport related costs – including non-physical barriers. Support for on-the-hoof cattle trade through national and regional policies will be crucial if the competitiveness of the Sahelian beef-export value-chain is to be strengthened in a context of growing urban demand for meat, declining consumer purchasing power and strong competition from other animal protein sources (fish, chicken and imported meat).

Keywords : cattle trade, West Africa, beef value-chain, livestock trekking on hoof, mobility

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