

Research Article

INCOME GENERATED BY TRANSHUMANT HERDERS IN THE RURAL COMMUNE OF N'GONGA (NIGER)

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ABSTRACT

This study was conducted at the cattle market in the rural commune of N'Gonga. It aims to determine the revenue generated by transhumance in the rural commune of N'Gonga. A survey was carried out among the various actors. The highest financial contribution for transhumant households was 197,608.7±15,232.7 FCFA, while the lowest was recorded for male goats (750±140.1 FCFA). The contribution of transhumant animals sold to the community budget is as follows 16,140±6,252 FCFA for large ruminants and 2,750±1,017.5 FCFA for small ruminants per market day.

Keywords: Economy- Pastoral- Market- Livestock- N'Gonga- Niger.

INTRODUCTION

In Niger, livestock farming is consolidating its position as the second largest source of export earnings after mining resources [SDDEL, 2012-2035]. Not only does it represent an important source of foreign currency for the State and local authorities, but it also contributes around 25% to household budgets [SDDEL, 2012-2035]. The contribution of livestock production in Niger is 11% of gross domestic product (GDP), 24% of agricultural GDP, 21% of export earnings and 62% of export earnings from agricultural products [Rhissa Z, 2010]. Among the different modes of livestock rearing, transhumance is practiced to cope with food insecurity of animals. Transhumant livestock farming, which is the alternative and seasonal movement of animals [Diallo *et al.*, 1985], is an animal production system adapted to the semi-arid Sahelian context. The rural commune of N'Gonga is used as a transit area for the herds on their way to and from the transhumance, where they spend a relatively long-time taking advantage of pastoral resources, the salt cure (in the Dallol Bosso valley) and the socio-economic transactions carried out at the N'Gonga livestock market. However, the income generated by transhumant herders at the N'Gonga livestock market is not well known, even though they present considerable numbers of animals for sale. Hence the need to determine the revenue generated by transhumant herders in the rural commune of N'Gonga.

MATERIALS AND METHODS

The study area

The study area is the rural commune of N'Gonga through the livestock market of N'Gonga. It was created by Law N°2002-14 of 11 June 2002, on the creation of communes. With a surface area of 37Km², i.e. 10.22% of the department of Boboye, the commune is limited:

- To the East and South, by the Urban Commune of Birni N'Gaouré;

- in its western part, by the rural communes of Fakara and Kouré;
- to the North, by the rural communes of Harikanassou and Kiota. The chief town of the rural.

commune (which is N'Gonga) is located 16 kilometers from the department of Boboye, 55 kilometers from the Dosso region and 107 kilometers from the capital Niamey (Figure 1). The population of the commune has been estimated at 33,328 inhabitants (of which 50.5% are women). It is divided between 31 administrative villages and 19 hamlets. The population density is around 88 inhabitants/km² with a growth rate of 3.90% (PDC, 2019). The climate is Sahelo-Sudanese with an average rainfall of 500 mm per year. It is characterised by constant heat and interannual variability of rainfall, which leads to droughts and/or floods, resulting in cereal and fodder deficits in some areas. The relief is characterised by the presence of the Bosso dallol, with sandy terraces and the plateau zone (Fakara) with gravelly soils. There are also large shallows that retain water in the rainy season, forming numerous permanent pools and permanent seedbeds. Two types of vegetation can be distinguished: The tiger bush on the plateaus, dominated by Combretaceae associated with herbaceous species such as *Andropogon gayanus*, and on the dallol, agroforestry parks dominated by *Faidherbia albida*, *Neocarya macrophylla*, *Diospyrosme spiliformis* and *Balanites aegyptiaca* (in the cultivated fields), *Hyphaene thebaica* (in the agroforestry parks) and *Borassus aethiopicum* (in the fallows).

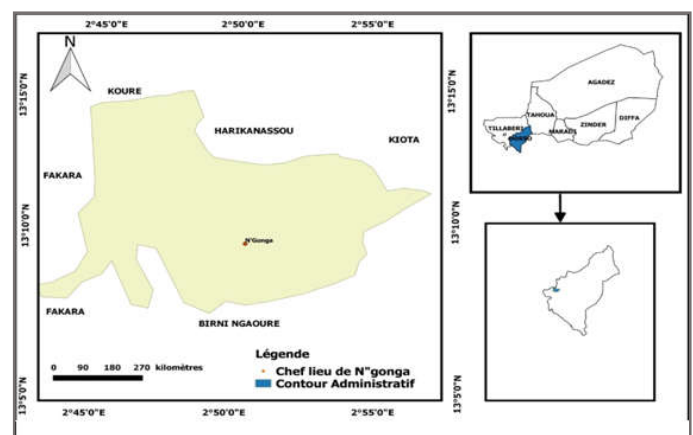


Figure 1 : Location of the rural commune of N'Gonga

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Survey

The methodological approach used for this study was a survey (with an individual questionnaire and an interview guide). A pre-survey made it possible to determine the target population composed of 144 actors distributed as follows: 137 transhumant herders, 1 mayor, 1 collector, 1 livestock agent, 1 representative of herders' associations, 1 rouga (customary leader of transhumant herders), 1 garso (second customary leader of transhumant herders appointed by the rouga) and 1 dogari (informant of transhumant herders appointed by the rouga). To determine the sample to be surveyed, the following procedure was used. Survey all the actors whose numbers do not exceed 35 in the same group; For numbers greater than 35 actors in the same group, the top third was selected by random draw. The sample to be surveyed was thus as follows:

Stratified sampling

Stratum 1: This stratum is made up of actors with responsibilities (of which there are 7): a mayor, a collector, a livestock agent, a rouga, a garso, a dogari and a representative of the livestock breeders' associations, AREN (Association for the Revitalization of Livestock in Niger). For this stratum, all the actors were surveyed by means of guided interviews.

Stratum 2: This stratum is made up of actors with limited responsibilities (i.e. transhumant farmers). For this stratum, random sampling was used. A total of 46 transhumant were surveyed by means of an individual questionnaire.

In total, the sample to be surveyed is 53 actors.

Data processing and analysis

All data was entered into an Excel spreadsheet. Tables were produced.

RESULTS

Financial contribution by animal category to transhumant household budgets

The highest financial contribution to the household budget by animal category was recorded for bulls (19,7608.7±15,232.7 FCFA). However, the lowest contribution of 750±140.1 FCFA was recorded for male goats (Table 1).

Table 1: Financial contribution by category to the budget of transhumant households

Category	Bring (FCFA)
Taurus	197608,7±15232,7
Bull calf	94866,66±91531,8
Cow	99043,47±71206
Heifer	19673,91±3360
Veal	9239,13±6479,7
Aries	26021,73±2521,7
Antennae	14904,34±1620,3
Sheep	16097,82±1498
Antennae	4510,86±760,4
Male Goat	11633,33±1225,9
Goat Female	12400±1047
Kid	907,60±166,8
Doe	4065,21±583,7
Young Male goat	750±140,1
Young Goat Female	195,65±38,7
Donkey	1304,34±251,9
Donkey Female	978,26±191,9

Taxes collected by the town hall

There are two types of taxes:

Presentation tax, the amount of which is 100 FCFA per large animal as opposed to 50 FCFA per small ruminant; Identification tax: 500 FCFA / large livestock as against 200 FCFA for small ruminants.

Table 2: Taxes levied by the town hall

Tax type	Large ruminants			Small ruminants	
	Cattle	camel	donkey	goat	Sheep
Identification fee (FCFA)	500	500	500	200	200
Presentation fee (FCFA)	100	100	100	50	50

Financial contribution of animals belonging to transhumant to the community budget

Table 3: Shows the financial contribution of animals belonging to transhumant herders to the municipal budget from presentation and identification fees.

Animals presented at the N'Gonga cattle market				
Species	Large ruminants/transhumant	Small ruminants/transhumant	Large ruminants/semi-dentary	Small ruminants/semi-dentary
Headcount	28,63±13,3	69,8±14,3	33,3±11,2	29,3±14,1
Animals sold at the N'Gonga cattle market				
Species	Large ruminants/transhumant	Small ruminants/transhumaner	Large ruminant/semi-dentary	Small ruminants/semi-dentary
Headcount	26,9±10,42	11±4,07	25,7±3,8	23,9±7,18
Input (FCF)	16 140±6 252	2 750±1 017,5	46 308	19 802,5

Status of transhumance in the community of N'Gonga

The commune receives large numbers of transhumant animals each year before continuing on to Mali, which is their host area. The presence of these transhumant animals is marked by the presentation and sale of large numbers of animals at the N'Gonga livestock market. The periods of departure and return favour an improvement in the revenues of the town hall through the various taxes. The market taxes are the presentation tax, the identification tax for animals sold, the slaughter tax, the tax collected at the loading bay and the road station for vehicles transporting animals. The revenue from the above taxes increases during the passage of transhumant animals because of the large flow of animals presented and sold at the livestock market. During their passage through the commune, transhumant herders make little use of the livestock services for interventions on the herds, as most of them walk around with their syringes in pockets doing the work themselves. Transhumant (large ruminant) herders leave Benin or Nigeria (especially herders with small ruminants) to come to N'Gonga (in May). After a stay of hardly more than a month, the transhumant continue on to Kouré and then Balleyara and Simiri. It is from Simiri that the transhumant herders return to Ménaka (Mali), despite the climate of insecurity prevailing in the locality. Transhumance mobilises certain resource persons (rouga, garso and dogari) whose duties are not paid for; they require

a lot of courage, determination and above all patience. However, they benefit from fees granted by the transhumant herders according to tradition (in the case of twin births, some transhumant herders grant one of the children to the rouga, garso or dogari).

DISCUSSION

Financial contribution to transhumant household budgets by species and category of animal sold

All species contribute to the household budget, but the highest performance was recorded for cattle, with bulls having the highest rate ($197,608.7 \pm 15,232.7$). This contribution also varied by category within the same cattle species. The peak of high selling price is observed in bulls as shown in the results of this study. The high price of this animal is due to the body mass it has. The selling price of bulls is around 280,623 FCFA compared to 182,380 FCFA for cows [Commission européenne, 2012].

Financial contribution of transhumance to the economy of the rural commune of N'Gonga

The budget of the rural commune of N'Gonga is mainly fed by the revenue collected at the livestock market, through the levying of various taxes on animals. Revenues from the collection of market taxes increase during the passage of transhumant animals because of the large flow of animals presented and sold at the market. The financial contribution of the livestock market to the commune's budget for 2020 is 7,635,800 CFA francs out of a forecast 6,670,000 CFA francs, i.e. an overrun of around 875,800 CFA francs (commune's 2020 budget). This result is similar to that of the commune of Chétimari (in Niger) where the sale of livestock contributes about 59% to the commune's budget [Agronomes et Vétérinaires Sans Frontières (AVSF), 2013]. In Burkina Faso, the sale of animals brings in more than 4 million CFA francs each year to the Gorom-Gorom town hall [Ouédraogo Maxime, 2004].

CONCLUSION

The results of this study show that transhumant livestock farming generates significant revenues from the sale of animals. This better performance was achieved because of a large flow of presentations and sales of animals recorded at the livestock market during the transhumance period. It has also helped to determine the revenue generated by transhumance when herders pass through the area.

CONFLICTS OF INTEREST

The authors of this manuscript declare that there are no conflicts of interest between them.

DECLARATION OF THE AUTHORS' CONTRIBUTIONS

In this study, Mr Ibrahim DJIBO was responsible for the elaboration of the research protocol, the collection and processing of data and the writing of the manuscript with the collaboration of Mr Bahari AMADOU ABDOULAYE and Mr Kailou FOGA. Mr. Siaka DIARRA contributed to the proofreading of the different versions to improve the scientific quality of the manuscript.

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