



2.3 Livestock

Cattle in Ouagadougou.

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Livestock keeping is a common phenomenon in West African cities. In Ouagadougou metropolitan area, about half of the total households rear livestock. In Tamale Metropolis it is 13%, equally distributed between the urban and peri-urban area.^{2,9, 2.10} In both cities, a traditional form of small-scale livestock keeping prevails that is frequently integrated with crop farming or other professional activities.

Manure management

The combination of livestock rearing and crop production allows the recycling of nutrients by using manure as a crop fertilizer. Furthermore, the marketing (Ouagadougou) and exchange (Tamale) of manure reduce manure loss and hence provide both economic and environmental benefits. Still, opportunities to market manure should be developed in Tamale to further reduce wastages. In Ouagadougou, homestead feeding of animals entails an important influx of nutrients to the city. Straws and hays are

harvested in the periphery of the city or in the rural hinterlands, and industrial by-products (cottonseed cake, molasses and brewer's spent grains) come from national industries or are imported from West African coastal countries. Due to the accumulation of nutrients through livestock manure in the city, nutrient depletion of the feed-supplying rural hinterland of Ouagadougou is expected.

Characteristics of livestock keeping

Usually, livestock keepers rear a diversity of livestock species, among which small ruminants and chickens are by far the most predominant. Without doubt, the Muslim tradition of backyard fattening of sheep and goats as well as the limited requirements for space and production inputs for poultry production contribute to the large number of livestock species in both cities. Yet, a transformation of the livestock sector is taking place. In the dairy sub-sector of Ouagadougou, richer urban dwellers, who live and work in the city, have been

establishing intensive farms in the periphery of Ouagadougou. They employ waged laborers to manage the farm, and strongly invest in breeding technologies (e.g., artificial insemination using imported semen of international breeds, crossbreeding to upgrade local zebu cows, hormonal synchronization) and commercial feedstuffs to increase the milk production output.

In parallel, a commercial pig production system has been developing close to Ouagadougou. Similar to the commercial dairy sub-sector, it is based on

crossbreeds of local and imported pig breeds, and on homestead feeding of pigs with purchased feedstuffs. Pigs are usually confined and do not move freely around the house to scavenge and find food for themselves. Pork is marketed through traditional marketing channels, or processed by butchers and in grocery stores (e.g., Marina market), which form a niche market for this type of product.^{2,11}

In Tamale, the transformation of the livestock sector is limited to sheep production in the inner-urban quarters of the city. Here, sheep production is less frequently

integrated with crop production, flock sizes tend to be larger and animal sales are increased as compared to the traditional production type, indicating a trend from subsistence toward commercial orientation of sheep production in Tamale.



Sheep in Tamale, Ghana.



Cattle grazing on fallow land in Tamale (Gumbehene New Dam).



Farmer fencing his field to protect it from grazing livestock.

Grazing livestock in Tamale and Ouagadougou

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Peri-urban and urban spaces of Tamale and Ouagadougou are frequently used for foraging of livestock (Figure 2.17). Our case studies among cattle kept in the periphery of both cities reveal that cattle are usually *kraaled* overnight, and are accompanied by a herder to the pasture area during daytime. During the rainy season, fallow lands and savannas close to the livestock *kraals* constitute the main grazing areas due to the occupation of land for crop cultivation. After crop harvest, grazing of crop residues is an important practice of cattle keepers. In the late dry season, animals have to walk further to reach more distant open grasslands and savannas in Ouagadougou,

while in Tamale, predominantly fallow lands and harvested rice fields are used for foraging during the dry season. Hence, animals spend more time on walking and browsing and less time on grazing in Ouagadougou. In Tamale, animals spend more time foraging outside their *kraals* in the late dry season. This is partly explained by the fact that in the less densely populated city of Tamale, cattle are *kraaled* either close to the livestock keeper's house, or away from the livestock keeper's residence at the outskirts of the city, or even in the rural hinterlands where they are managed by *Fulani* herdsmen.

For more information:

Akapali, M. 2018. *Seasonal variation in forage availability and grazing behavior of cattle in selected peri-urban areas in*

the northern region of Ghana. MSc thesis. University for Development Studies, Ghana.

Sarambé, C. 2016. *Analyse du système d'alimentation des vaches laitières dans les fermes périurbaines de la ville de Ouagadougou*. Diploma thesis. University Polytechnique de Bobo-Dioulasso, Burkina Faso.



Figure 2.17. GPS track showing grazing routes of cattle kept in the city centre of Tamale, Ghana.