

# Typology and characteristics of peri-urban dairy cattle farms in the coastal areas of Benin

Fifame Panine Yassegounge<sup>1,3</sup>, David Oloukoi<sup>1</sup>, Augustin K.N. Aoudji<sup>2</sup>, Eva Schlecht<sup>3</sup>, Luc Hippolyte Dossa<sup>1</sup>

<sup>1</sup>Ecole des Sciences et Techniques de Production Animale, Faculté des Sciences Agronomiques, Université d'Abomey-Calavi, Benin

<sup>2</sup>Ecole d'Economie, Socio-Anthropologie et Communication pour le Développement Rural, Faculté des Sciences Agronomiques, Université d'Abomey-Calavi, Benin

<sup>3</sup>Animal Husbandry in the Tropics and Subtropics, University of Kassel / Georg-August-Universität Göttingen, Germany

panineyasse@yahoo.com

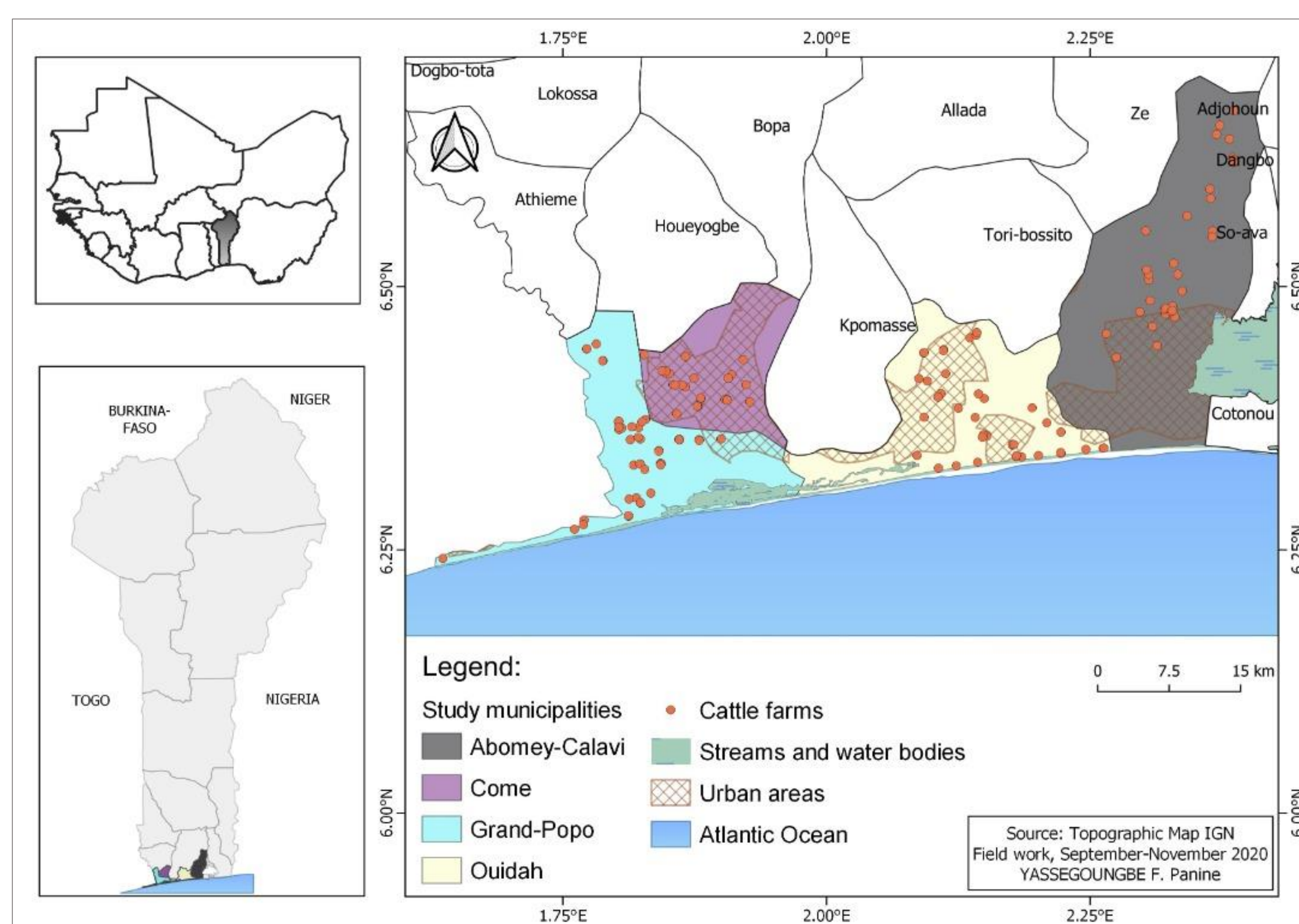
## Background and Aims

- Rapid urbanization, growth in population, and rising incomes are the main drivers of increasing demand for livestock products in Sub-Saharan African countries.
- Rise of dairy cattle farms in peri-urban areas to meet the fast-growing urban demand for milk and milk products.
- Lack of studies on the peri-urban milk production systems of Benin and their contribution to the urban food system.

→ We analyzed the diversity of dairy cattle farm systems in peri-urban areas.

## Material and Methods

- Four municipalities in the peri-urban area of South Benin: Abomey-Calavi, Ouidah, Grand-Popo & Come (Fig. 1).
- Snowball sampling method as no list of cattle farms was available.
- A questionnaire survey to collect information on herders' socioeconomics, cattle herd characteristics, and husbandry practices.
- Data from 190 dairy cattle farms.
- Statistical analysis (FAMD & HCPC) with R software.



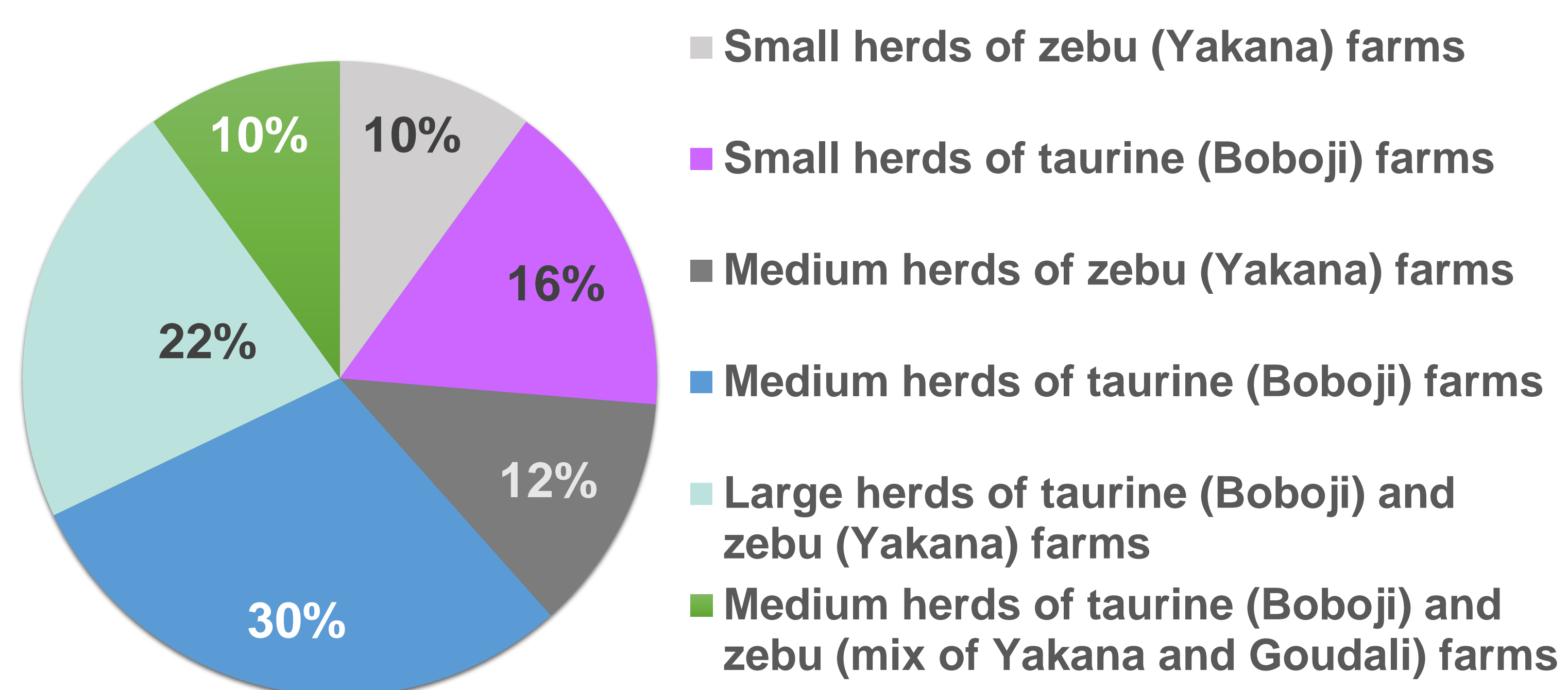
**Fig. 1** Map of the coastal region of Benin showing the research locations.



**Fig. 4** Cattle grazing under coconut trees.

## Results

- Six types of peri-urban dairy cattle farms (Fig.2).
- Main discriminating variables: cows' breed, herd size, and amount of milk produced /herd/day.
- Three breeds were observed on the sampled farms: Taurine Boboji (65%), Zebus Yakana (also known as White Fulani), and Goudali (35%), (Fig. 3).



**Fig. 2** Peri-urban dairy farm types in South Benin.



**Fig. 3** Cattle breeds in the peri-urban dairy cattle farms of South Benin.

- Cattle were exclusively fed on communal natural pasture (once or twice a day) with mineral supplementation in 42% of farms.
- About 45% of the farms integrated cattle production with other agricultural activities, including coconut plantations (22%), where cow manure is used as fertilizer (Fig. 4).
- The average proportions of cows (dry and lactating) and of heifers ranged from 37.6 to 47.5% and 13.1 to 19.7%, respectively.
- Produced milk was either transformed into traditional cheese (32% of farms) or sold raw (85%).
- Milk and cheese sales represented 84% of the total farm income for 3 out of the 6 farm types ( $p \leq 0.019$ ).

## Conclusions

- In the current context of rapid urbanization, grazing only cannot provide pasture for increased milk production.
- In addition to improved feeding strategies, herd structure should be balanced in terms of the ratio between milk-producing and non-producing animals.

