Assessment of herbaceous biomass and their contribution to animal feeding in the context of climate change in Northern Benin

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Introduction

- In Northern Benin, pastoralists rely on livestock for food and other products (Anihouvi et al., 2020).
- However, they face serious challenges for feeding their animal due to changes in the natural composition of the vegetation (Diogo et al., 2017).

Aim

Evaluate existing herbaceous species, their biomass and contribution to animal feeds in the context of global challenges.

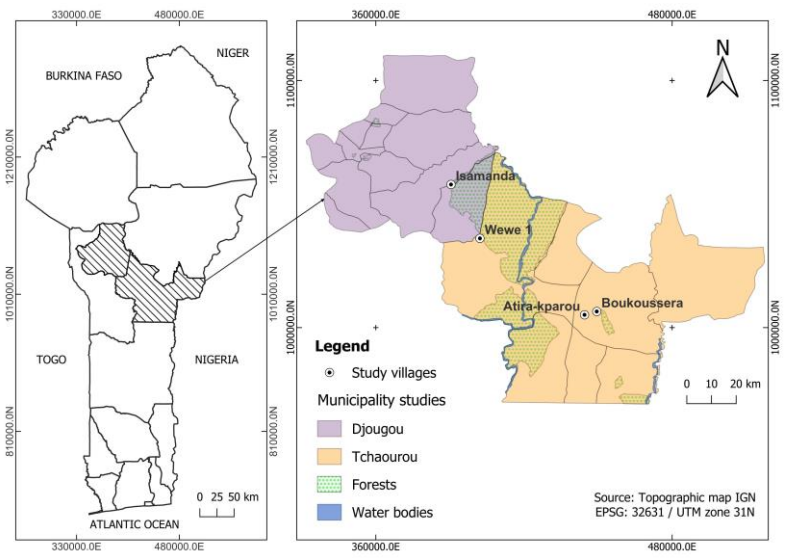


Fig1. Map of the study sites (right) within the map of Benin (left)

Methods

Interviews and focus group discussions

20 communal grazing lands selection in 4 different Fulani villages

Timely vegetation data collection during two years

References:

- Anihouvi, E. L., Hanaa, S., Anihouvi, V. B., & Harun, K. (2020). Milk and Dairy Products Production in Benin Milk and Dairy Products Production in Benin. Akademik Gida, January. https://doi.org/10.24323/akademik-gida.667265
- Diogo, R.V.C., Dossa, L.H., Adjassin, J.S. Gnavo, Alkoiret, I.T., 2017. Management of pastures by transhumant herders in two host areas in Benin. In: Camara, A.D., Taugourdeau, S. (Eds.), Pastoralism in the current of Global changes: Stakes, challenges and Prospects. Dakar, Senegal, pp. 20–24.

Conclusion

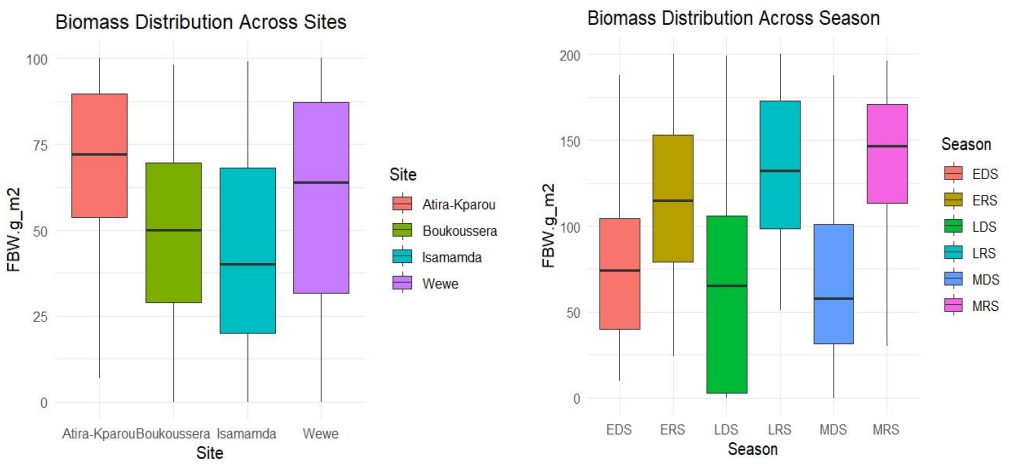
- Forage availability relies on seasons and locations.
- The composition of the biomass produced does not guarantee a valuable feeding opportunity
- Locally-based Sustainable Rangeland management to enhance ecosystem services and improve livestock performance

Results & Discussion

Site effect is significant ($p = 0.0002$) → Biomass production varies across different locations.

High cover by herbaceous species of low nutritional value for the livestock

Impact of Local Conditions, influence of management practices, and ecological implications



ERS: early rainy season, MRS: mid rainy season, LRS: late rainy season,
EDS: early dry season, MDS: mid dry season, LDS: late dry season

Fig 2. Fresh biomass production across sites (left) and seasons (right)

Table. 1. Dominant species and their ground cover

Species	Ground cover
Hyptis suaveolens	30%
Grona triflora	27%
Chamaechrista rotundifolia	20%
Digitaria sanguinalis	16%
Stylosantes guineensis	5%
Setaria verticillata	2%

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