

Characterizing feeds and feed availability in Sud-Kivu province, DR Congo



Samy B. Bacigale¹, Birthe K. Paul², Fabrice L. Muhimu³, Neville Mapenzi³, Michael Peters⁴ and Brigitte L. Maass²



¹ Université Evangélique en Afrique (U.E.A.), Bukavu, DR Congo: bcsamy@yahoo.fr; fabriceml@yahoo.fr

² International Center for Tropical Agriculture (CIAT), Nairobi, Kenya: b.paul@cgiar.org; b.maass@cgiar.org

³ Centre de Recherche en Sciences Naturelles (CRSN), Station de Lwiro, Sud-Kivu, DRC: nevillemapenzi30@yahoo.fr

⁴ International Center for Tropical Agriculture (CIAT), Cali, Colombia: M.Peters-CIAT@cgiar.org

Introduction

- Animal husbandry in Sud-Kivu province of the Democratic Republic of the Congo (DRC) is gradually moving towards stall feeding, due to demographic pressure and scarcity of collectable forages.
- Feed is considered one of the main constraints faced by livestock production, especially in the dry season.
- the livestock feeding situation is further exacerbated by unaffordable, fluctuating prices and inaccessibility of feed concentrates and lack of improved forages adapted to marginal conditions that do not compete with food crops.
- This study aimed to assess specific constraints and opportunities in the current feeding systems, as well as feed availability in this area.



PRA in Mohongoza – Kalehe territoire
02° 04'10.4" S, 28° 53'54.6" E, 1585 m asl.



PRA in Cirunga – Kabare territoire
02° 29'46.4" S, 28° 47'26.0" E, 2001 m asl.



PRA in Tubimbi – Walungu territoire
02° 48'44.2" S, 28° 35'28.8" E, 1073 m asl.



PRA in Kamanyola – Walungu territoire
02° 44'13.7" S, 29° 00'04.2" E, 973 m asl.

Materials and Methods

Study conducted in 4 sites representing the agro-ecological conditions of Sud-Kivu: Muhongoza (Kalehe territoire), Cirunga (Kabare territoire), Tubimbi and Kamanyola (both in Walungu territoire), and applying 2 approaches:

- Feed Assessment Tool (FEAST) applied (by Duncan et al. 2012):
 - Participatory Rural Appraisal (PRA) with 21 to 34 farmers per site, including all wealth categories, age and gender of farmers
 - Individual interviews to collect specific quantitative information from 9 households in each site.
- Forage identification: 2 key informants per site to show the forage species usually fed to their animals. Morphological description were conducted on those plants and their biotope before the identification of herbarium specimens.

Results

- Dominant feeding systems: Grazing (mostly by tethering) and collecting green forages from fields and roadsides.
- Only 37% of farmers cultivate forages on small spaces, without further extension due to lack of seeds and vegetative propagating materials; cultivated forages contribute only 6% to the diet of animals.
- 93 different forage species identified belonging to 19 botanical families (Table 1); dominant families were Poaceae, Asteraceae and Fabaceae.
- High linkage of feed availability to rainfall pattern with a great shortage from May to September (Dry Season) observed (Fig. 1).

Table 1. Forage species collected by farmers in Sud-Kivu and botanical families

Botanical family	Representation of forage species			
	Kalehe (N)	Kabare (N)	Walungu (N)	General Mean (%)
Poaceae	15	19	27	41.8
Asteraceae	8	11	19	26.0
Fabaceae	3	1	6	6.6
Convolvulaceae	1	2	2	3.4
Cyperaceae	3	1	0	2.7
Amaranthaceae	0	1	3	2.7
Musaceae	1	1	2	2.7
Others	6	5	9	14.1
Total	37	41	68	100.0

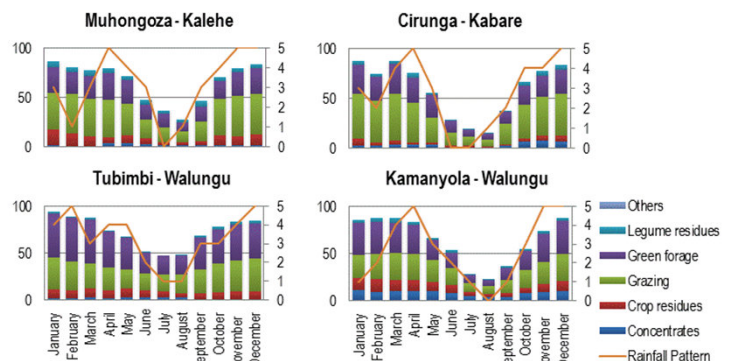


Fig. 1. Feed resource availability throughout the year as assessed by the FEAST method (Duncan et al., 2012) in four locations (Muhongoza, Cirunga, Tubimbi, Kamanyola) of three territoires (Kalehe, Kabare and Walungu)

Proposed ways to overcome issues

- Adopting and establishing improved forages with high biomass yield and tolerance to drought stress
- Places to establish the improved forages once adopted:
 - Roadsides near homestead
 - Banana plantation because of microclimate
 - Edges of fields in contour bands for additional erosion control
 - Sloping and degraded lands without competition for crop cultivation

Acknowledgement

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