



# Forage Options for Tanzania Southern Highlands: Preliminary Assessment

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## Introduction

- Tanzania southern highland is key for the country's agriculture including livestock. Districts involved in this work include Mufindi, Njombe and Rugwe
- Livestock feeds assessment done before this activity had shown that forages are inadequate at least for half of the year across the districts
- Matching forages with the correct ecologies (Mwendia et al., 2017 and the social-cultural background of the communities involved livestock is key to increasing forage production.
- In collaboration with Tanzania Livestock Research institute (TALIRI) we set out to try selected forages together with farmers in a participatory way
- To select test forages we first mapped suitability using 'Targeting Tools' a web GIS system, for grasses and legumes, following which we sort for seeds in readiness for demonstration trials
- We established forage demonstration trials comprising 14 treatments, replicated 3 times, in 2 sites per district
- After 4 months of establishment, all treatments across the trial sites were 'standardized' by cutting back, with data collection focusing on subsequent re-growths

## Objective

→ We set out to evaluate selected forages (grasses, legumes) for dry matter (DM) productivity in 3 districts in southern highlands of Tanzania to identify options for farmers to improve forage production, for livestock feeding



## ...findings

- ✓ After standardization *Brachiaria* in Njombe and Mufindi recuperated slowly such that it was not harvested in these two districts except Mufindi
- ✓ Dry matter yields (t/ha) across the district were in the order Rugwe > Mufindi > Njombe even when the yields were converted to kg DM day<sup>-1</sup>
- ✓ Napier grass when intercropped with Lablab produced most of the DM yields and Rhode intercropped with desmodium coming close
- ✓ There were differences among Wards within districts and across districts especially in Igowole and Kiwira, in Mufindi and Rugwe respectively.
- ✓ Across all Wards, the control was yielding less than most of the other treatments



## Findings

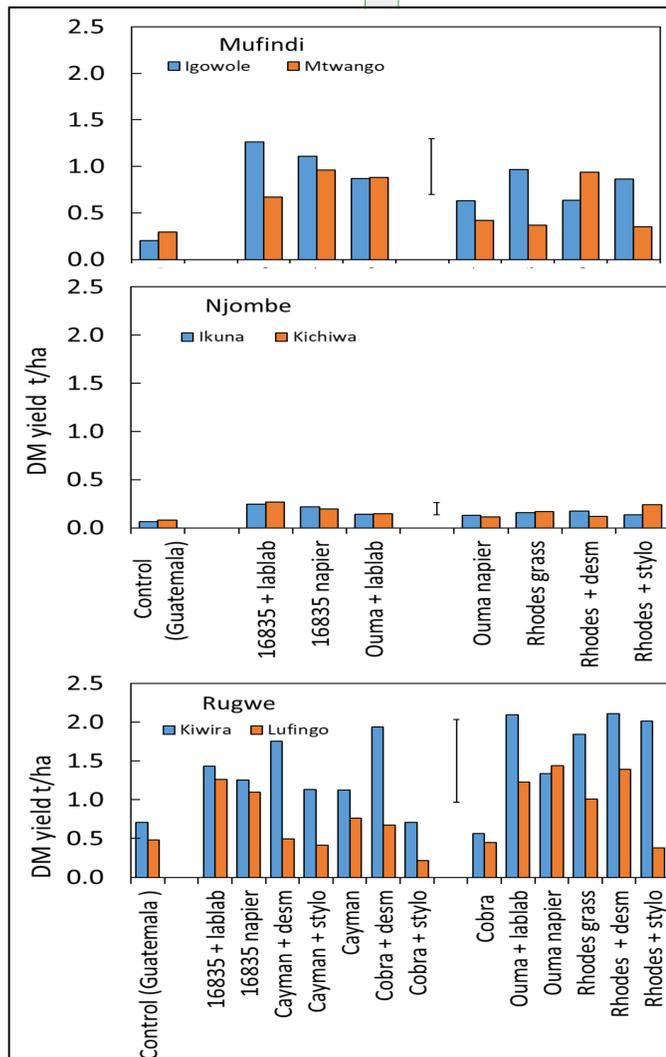
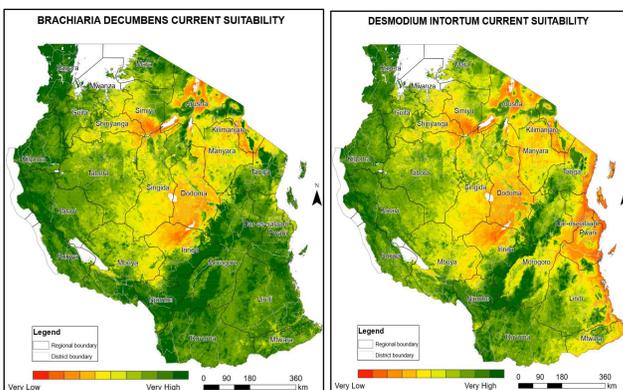


Figure 1. First harvest dry matter yield of test forages in Mufindi (a), Njombe (b) and Rugwe (c) districts of Tanzania

## Way forward

- More harvests to be undertaken across dry and wet seasons in all sites
- Forage Nutritional quality assessment to derive which treatment produces most nutrients and accessible by the livestock
- Across the trial sites farmers will be involved in preferential raking to identify which treatments are preferred by farmers across the districts
- Animal feeding trial shall be undertaken to measure and show case changes in milk production upon feeding quality forages

## References

Mwendia, S. W., B. L. Maass, D. G. Njenga, F. N. Nyakundi, and A. M. O. Notenbaert. 2017. "Evaluating Oat Cultivars for Dairy Forage Production in the Central Kenyan Highlands." *African Journal of Range and Forage Science* 34(3).

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