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 ‘standardised’ 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 Broocharia in Njombe and Mufindi recuperated slowly such that it was not harvested in these two districts except Mufindi
- Dry matter yields (U/ha) across the district were in the order Rugwe> Mufindi > Njombe even when the yields were converted to kg DM day
- Napier grass when intercropped with Lablab produced most of the DM yields and Rhodes intercropped with desmodium coming close
- There were differences among Wards within districts and across districts especially in Igwolwe and Kiwira, in Mufindi and Rugwe respectively
- Across all Wards, the control was yielding less than most of the other treatments

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

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References


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

Figure 2: First harvest dry matter yield of test forages in Mufindi (a), Njombe (b) and Rugwe (c) districts of Tanzania

Figure 3: First harvest dry matter yield of test forages in Mufindi (a), Njombe (b) and Rugwe (c) districts of Tanzania