



Performance of *Crotalaria Juncea* and *Lablab purpureus* in three agro-ecologies of Kenya

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INTRODUCTION

- In sub-Saharan Africa, livestock productivity is often limited by seasonal forage shortages.
- Leguminous forage crops offer sustainable, nutrient-rich feed options for ruminants (Forsythe 2019).

OBJECTIVE

To assess biomass yield and nutritional value of *Crotalaria Juncea* and *Lablab purpureus* in contrasting agroecologies.

RESULTS

Lablab purpureus Jhansi and Highworth had the highest dry matter yields, particularly in mid- and low-altitude zones (up to 20.23 t/ha in UM2) (Figure 1).

Lablab Maridadi, the local check, consistently had the lowest biomass across all sites (poor germination of the local check was observed in LH3), despite having the highest crude protein content (up to 30.99%).

Forage performance varied by site, with Upper Midland 2 and Lower Midland 1 supporting the best yields (Figure 2).

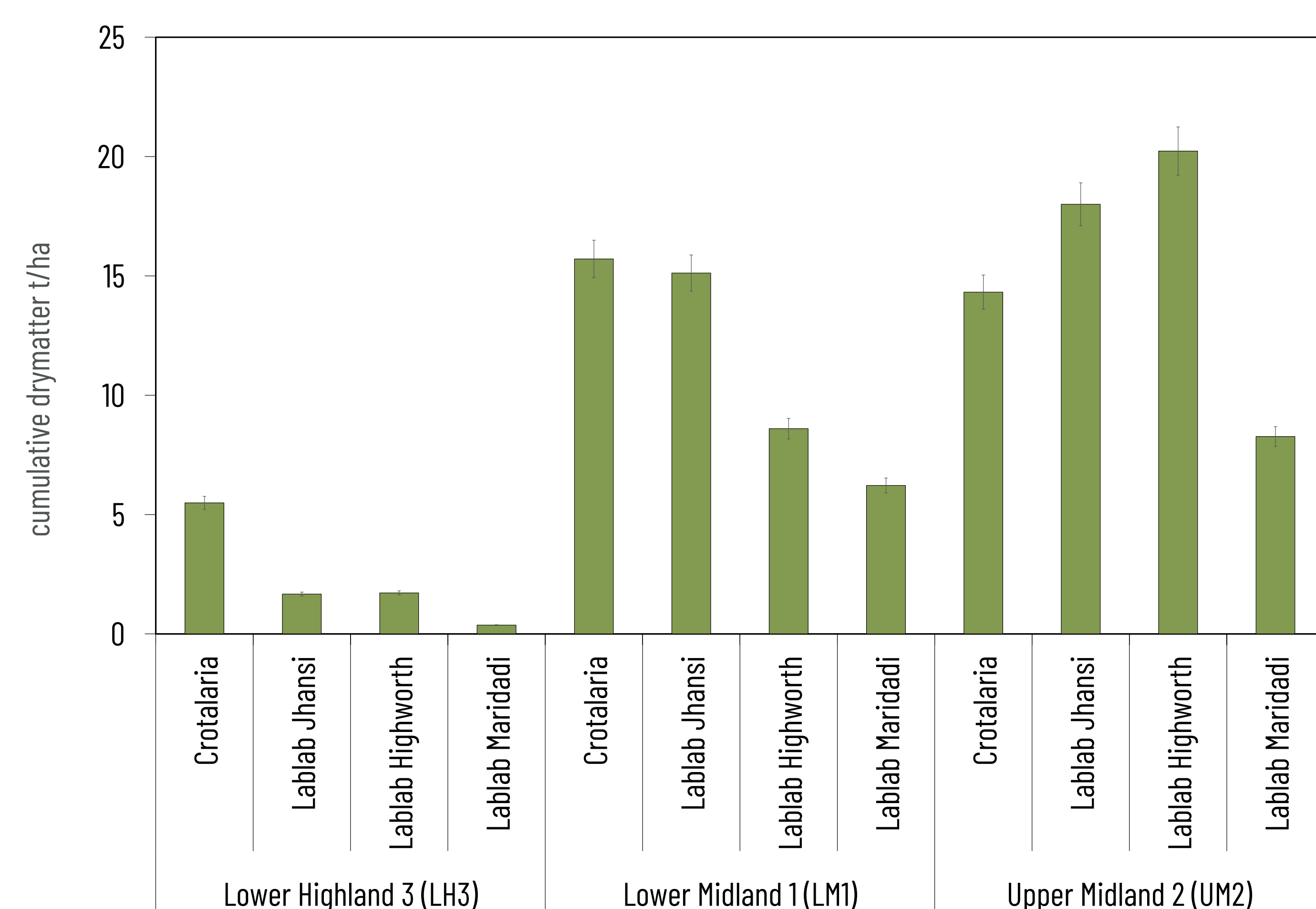


Figure 1. Cumulative dry matter across sites.

MATERIALS AND METHODS

- **Study Sites:** Trials were conducted in three agroecological zones of Kenya (Lower Highland 3, Lower Midland 1, and Upper Midland 2) varying in altitude, rainfall, and soil type.
- **Data Collection:** Measurements included plant height, dry matter yield, and forage quality (crude protein).
- A **randomized complete block design** (RCBD) with three replicates per site was used to evaluate three *Lablab purpureus* varieties (ILRI accession No. 147), Jhansi (ILRI accession No. 6529), Maridadi (Local check) and *Crotalaria juncea*.

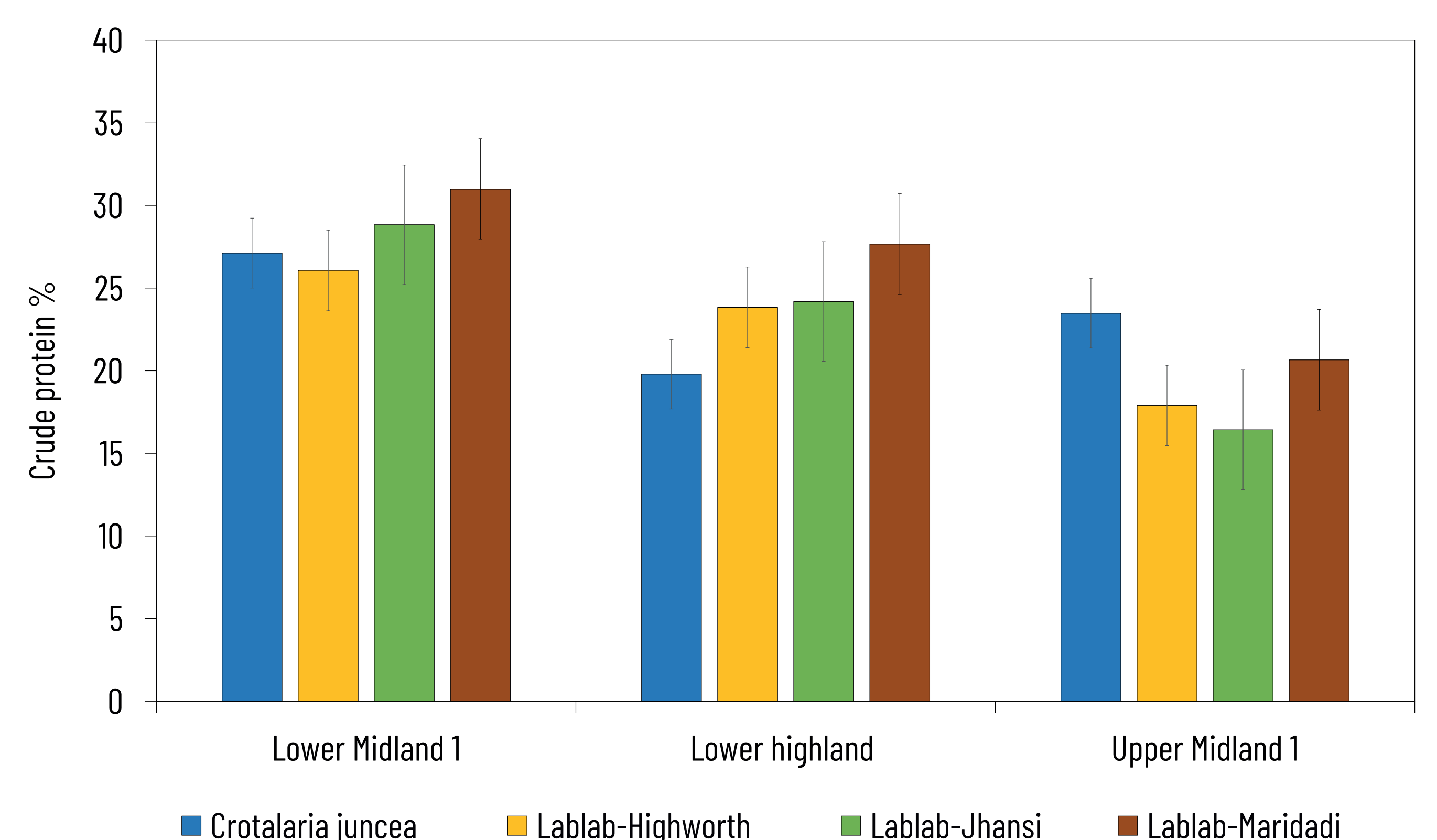


Figure 2. Cumulative crude protein across sites.

CONCLUSION

- There is a clear genotype × environment interaction, suggesting that site-specific forage selection is critical for maximizing yield and feed quality.

REFERENCES

Forsythe, C. (2019). Exploring the viability of re-introducing *Lablab purpureus* (L.) Sweet as a multifunctional legume in northern Tanzania. 1-79. <https://stud.epsilon.slu.se>

ACKNOWLEDGMENTS

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