Agronomic evaluation of 15 *Centrosema* sp. accessions in time of maximum and minimum rainfall in Colombia

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Introduction

- Worldwide, livestock is one of the most important economic activities for the economy of developing countries.
- In fact, it is the crop with the largest land use on the planet (around 3,400 million hectares for livestock feed).
- Much of the livestock sector is managed in grazing systems.
- Often native or naturalized pastures generate seasonal food shortages at critical times.

Objective

Agronomic evaluation of 15 accessions of *Centrosema* sp. obtained from the Genetic Resources Bank of The Alliance Bioversity International and CIAT, in Palmira, Colombia.

Methodology

- Data was collected for 14 months, between 2020 and 2021, including periods of maximum and minimum precipitation.
- The size of the plots was 9m² with three repetitions per treatment.
- Cuttings were carried out at different regrowth ages:
  - First cutting: 35 days
  - Secund cutting: 42 days
  - Third cutting: 49 days after cutting.
- Evaluated variables: Agronomic parameters (coverage, vigor, height; Data on these parameters are not presented) and Dry matter production (DM).

Results and analysis

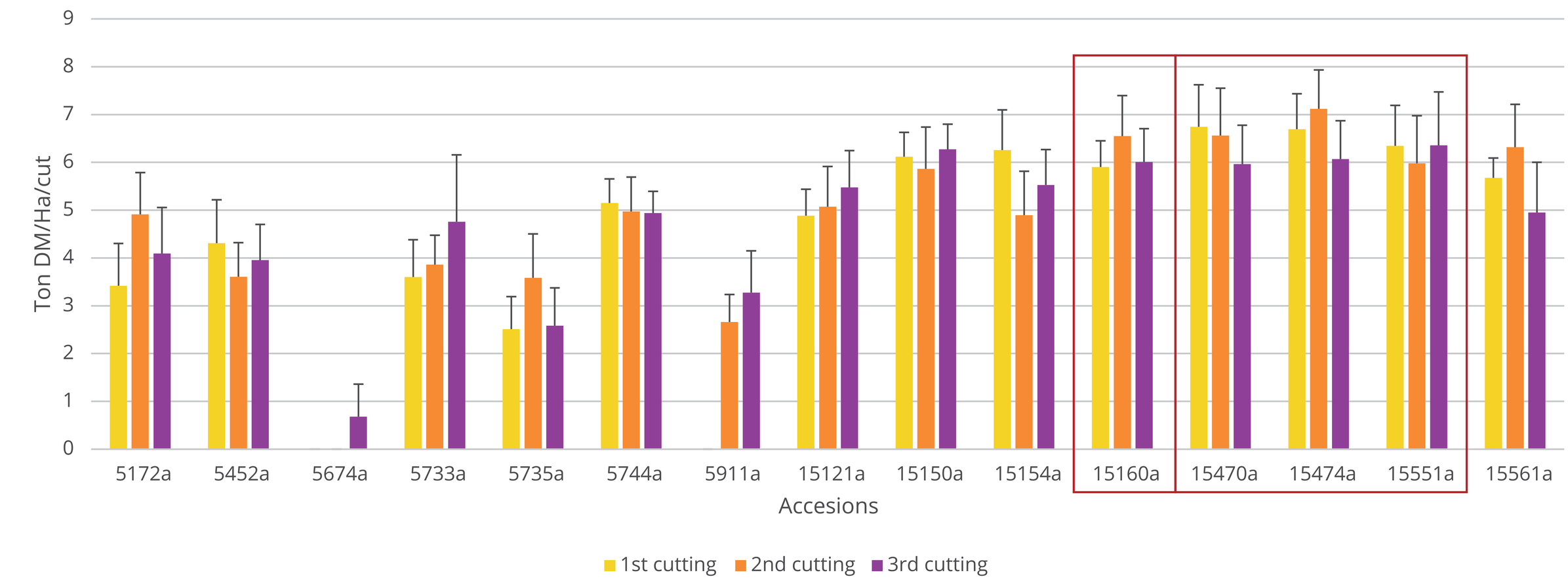

Figure 1. Biomass production under different recovery ages. Source: own elaboration.

Forage production

- The best accession when averaging biomass production based on DM in the two climatic seasons was CIAT 15474, surpassing control CIAT 15160 by 0.57 ton DM ha^{-1}.
- The highest forage production based on DM occurred in the second cutting with 7.12 ton DM ha^{-1} for the CIAT 15474 accession, averaging the two climatic seasons.
- *Centrosema* sp. It is a suitable material to be used as a forage alternative for animal feed according to biomass production under the soil and environmental conditions of Valle del Cauca in Colombia.
- Although the best age for harvest was the second cut, it is necessary to check the information obtained with an analysis of the nutritional quality of the materials.

Conclusions

» Diversification in the inclusion of forage materials for animal feed, through the development of forage legumes, will provide multiple benefits at a productive and environmental level, improving the availability of food in critical times, positively impacting parameters such as weight gain of animals.

» The Forage Network project generated critical information to identify promising materials that can be used in future experiments to mitigate greenhouse gas emissions in the tropics.

Further reading

Heinritz SN; Hoedtke S; Martens S; Peters M; Zeyner, A. 2012. Evaluation of ten tropical legume forages for their potential as pig feed supplement. Livestock Research for Rural Development 24, #7. http://www.lrrd.org/lrrd24/1/hein24007.htm

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