



## Native species for integration crop-livestock-forest in Planosols in the “Canal do Sertão” influence region in Alagoas, Brazil.

João G. COSTA<sup>1\*</sup>, Tâmara C. de A. GOMES<sup>1</sup>, Mayara A. SOUZA<sup>2</sup>, Paul Lineker A. de MELO<sup>3</sup>, Kallianna D. ARAÚJO<sup>3</sup>

<sup>1</sup> Embrapa Tabuleiros Costeiros/UEP Rio Largo, CP 2013, 57061-970, Maceió, AL, Brazil.; <sup>2</sup> FAPEAL/ CNPq-MCTI/Embrapa Tabuleiros Costeiros/UEP Rio Largo, CP 2013, 57061-970, Maceió, AL, Brazil.; <sup>3</sup> FAPEAL/ CNPq-MCTI/Instituto Federal de Alagoas - IFAL, Rua 17 de agosto, s/n, Centro, 57120-000, Satuba, AL, Brazil; <sup>4</sup> Universidade Federal de Alagoas-UFAL/Instituto de Geografia, Desenvolvimento e Meio Ambiente, Campus A.C. Simões, BR 104, 57072-970, Maceió, AL, Brazil.

E-mail address of presenting author\*: [joao-gomes.costa@embrapa.br](mailto:joao-gomes.costa@embrapa.br)

### Introduction

Alagoas semiarid region is characterized by low rainfall and shallow soils, hindering the activities related to agriculture. Alagoas Government is building the “Canal do Sertão”, which carries water from the São Francisco River for this entire region, both for human consumption and for irrigation and livestock. However, according to the Agro-Ecological Zoning of the State of Alagoas - ZAAL (Embrapa, 2012), most of the Canal do Sertão chute ever built, is over Planosols. Their potential for agricultural use is considered restricted, depending on the depth of the horizon “B plânico”, which drastically restricts drainage. Usually, agricultural use is made with subsistence crops and pastures. The major limitations to agriculture are related to restricted drainage; limited effective depth; stoniness and / or rockiness; presence of cemented horizons; sodicity and salinity; susceptibility to erosion; beyond the restrictions of natural fertility and regional water deficit. In this context, the establishment of an iLPF system using native species with multiuse potential (fodder, timber, medicinal) naturally occurring in local Planosols, will expand the prospects for sustainable use of this region. Thus, this study aimed to identify native species with the potential to form an iLPF model suitable for the soil and climatic conditions of Alagoas semiarid region.

### Material and Methods

The prospection of native species with the potential to form the iLPF was carried out in three locations on Planosols of Alagoas semiarid region. With the assistance of woodsmen and local farmers sought to species that cattle selected for grazing in times of high food availability. Soil (up to the height of the emergence of B plânico) and plant tissue sampling were performed at each location, in order to associate quality characteristics of plants with soil properties.

### Results and Conclusions

The tree species “feijão bravo” (*Capparis flexuosa*), “mororó” (*Bauhinia cheilantha*) and “pau piranha” (*Laetia apetala*) and the herbaceous “marmelada” (*Commelina* spp.) were selected. These species were present in all areas and were unanimously considered due to their forage and medicinal use in the region. The analysis of plant tissue showed that the bromatologic quality and antioxidant activity (total phenols and flavonoids) of selected species varied in function of differences between the soil characteristics observed between Planosols.

### References cited

EMBRAPA. *Zoneamento Agroecológico de Alagoas: levantamento de reconhecimento de baixa e média intensidade dos solos do Estado de Alagoas*. Recife: Embrapa Solos. 2012. 238p. (Relatório Técnico).

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