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Cattle preferences for two forage tropical trees, *Calliandra calothyrsus* and *Erythrina berteroana*

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Conclusions

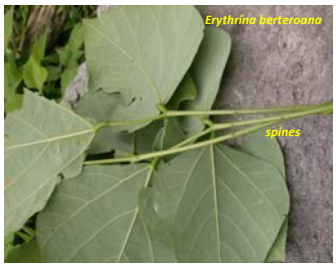
Calliandra calothyrsus is more preferred by cattle than *Erythrina berteroana* despite its higher nutritional value and it could be an interesting option in order to complement cattle diets during the dry season in tropical areas.

Introduction

In most areas of Central America during the dry season cattle diets are based on the availability of bahía grass (*Paspalum notatum*), but its nutritional value is very scarce in this period. The aim of this work was to discover cattle preferences for two nutritious forage trees *(Calliandra calothyrsus* and *Erythrina berteroana)* which were unknown by the animals in relation to the well know bahía grass.

Material and methods

During a period of 10 days, 4 female Pardo-Brahman breed (6 yr old) were placed in individual pens and daily offered 0.5 kg of fresh forage of the three species simultaneously. Individual animals were tested separately and in turn, each one was allowed to consume the material undisturbed for 15 minutes. A preference index (IP) was calculated using the formula: IP = C*i*/SC*n* (Ci is the consumed weight of species *i* and SC*n* is the total weight of forage consumed). Two samples of each species were chemical analyzed following the AOAC (1990) and Van Soest et al. (1991) procedures.



Results

Chemical composition (% DM)

	CP	NDF	ADF	ADL	Energy (j/g)
Paspalum	7,32	69,66	36,60	3,26	18.726
Calliandra	19,73	38,18	29,96	12,20	20.614
Erythrina	25,33	47,31	27,00	6,19	23.337

Results showed a higher values of protein content and energy for *Erythrina*, but the mean forage browsed was higher ($p < 0.05$) in the case of *Calliandra* (274 ± 25 g) respect to *Erythrina* (128 ± 22 g) and *Paspalum* (187 ± 25 g). The IP values for *Calliandra*, *Erythrina* and *Paspalum* (0.47, 0.32 and 0.22 respectively) confirmed a major preference for *Calliandra*. Palatability factors, such spiny petioles and midribs in leaves or secondary compounds, could explain the lower acceptance of *Erythrina*.