

Leaf area and dry matter of four forage grasses of genus *Urochloa* subjected to aluminum rates in the nutrient solution

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^a FAPESP Process 2013/02986-0

Introduction

The basis for feeding Brazilian cattle is on the grasses. Much of the Brazilian cattle herd is located in the region of savannas, whereupon, its soils present high acidity and high aluminum (Al) saturation. The aim of this study was to evaluate the leaf area and dry matter of four forage plants: *Urochloa brizantha* cv. Piatã, *Urochloa brizantha* cv. Marandu, *Urochloa brizantha* cv. Xaraés and *Urochloa decumbens* subjected to Al rates in the nutrient solution.

Methods

In order to evaluate the leaf area and dry matter of the plants, four forages were grown in the nutrient solution with four rates of Al (0, 12, 24 and 36 mg L⁻¹). The experimental design was completely randomized blocks, in a factorial scheme 4 x 4 (four rates of Al x four grasses), with four replications. The harvest of the material was performed at 35 days after the beginning of the treatments and leaf area was determined by LICOR-3100. Subsequently plant material was dried for 72 hours (65 °C) in an oven with forced air circulation. Means were compared using the Tukey test at 5% significance level.

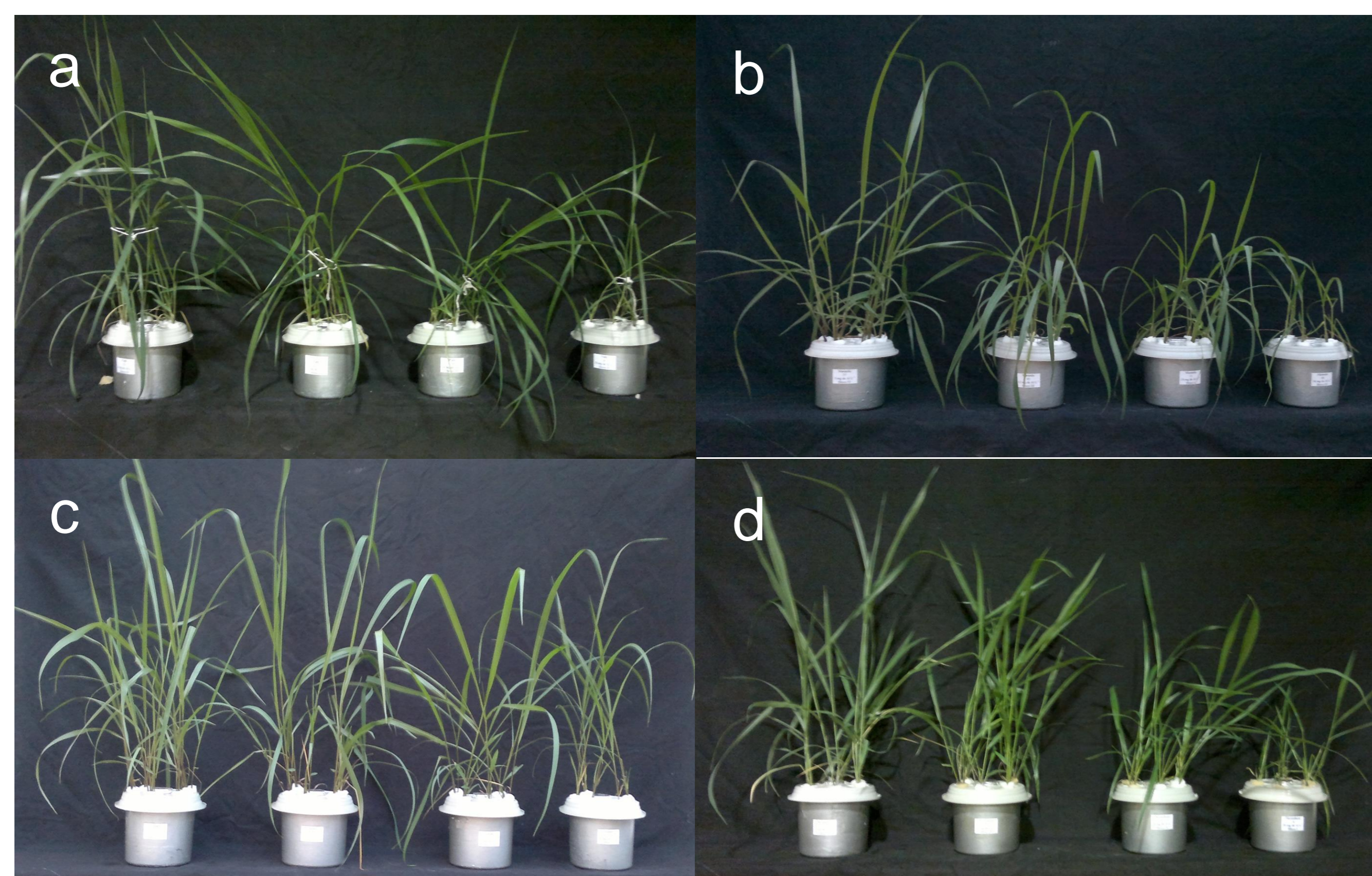
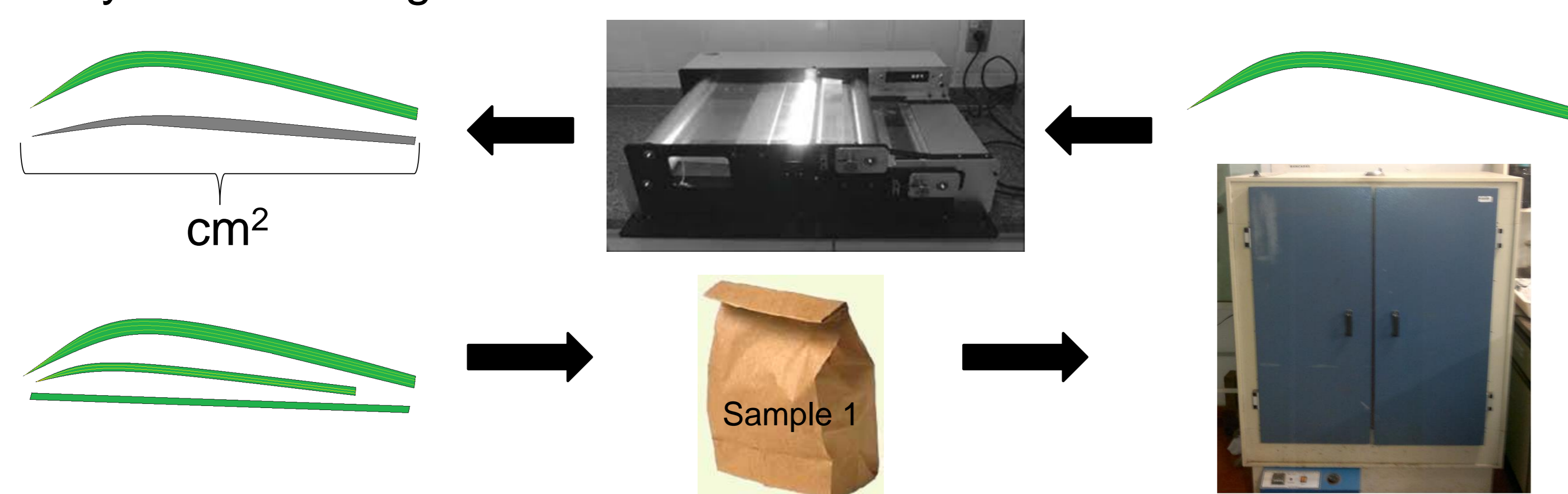


Figure 1: (a) *Urochloa brizantha* cv. Piatã; (b) *Urochloa brizantha* cv. Marandu; (c) *Urochloa brizantha* cv. Xaraés; (d) *Urochloa decumbens*, subjected to Al rates in the nutrient solution.

Results

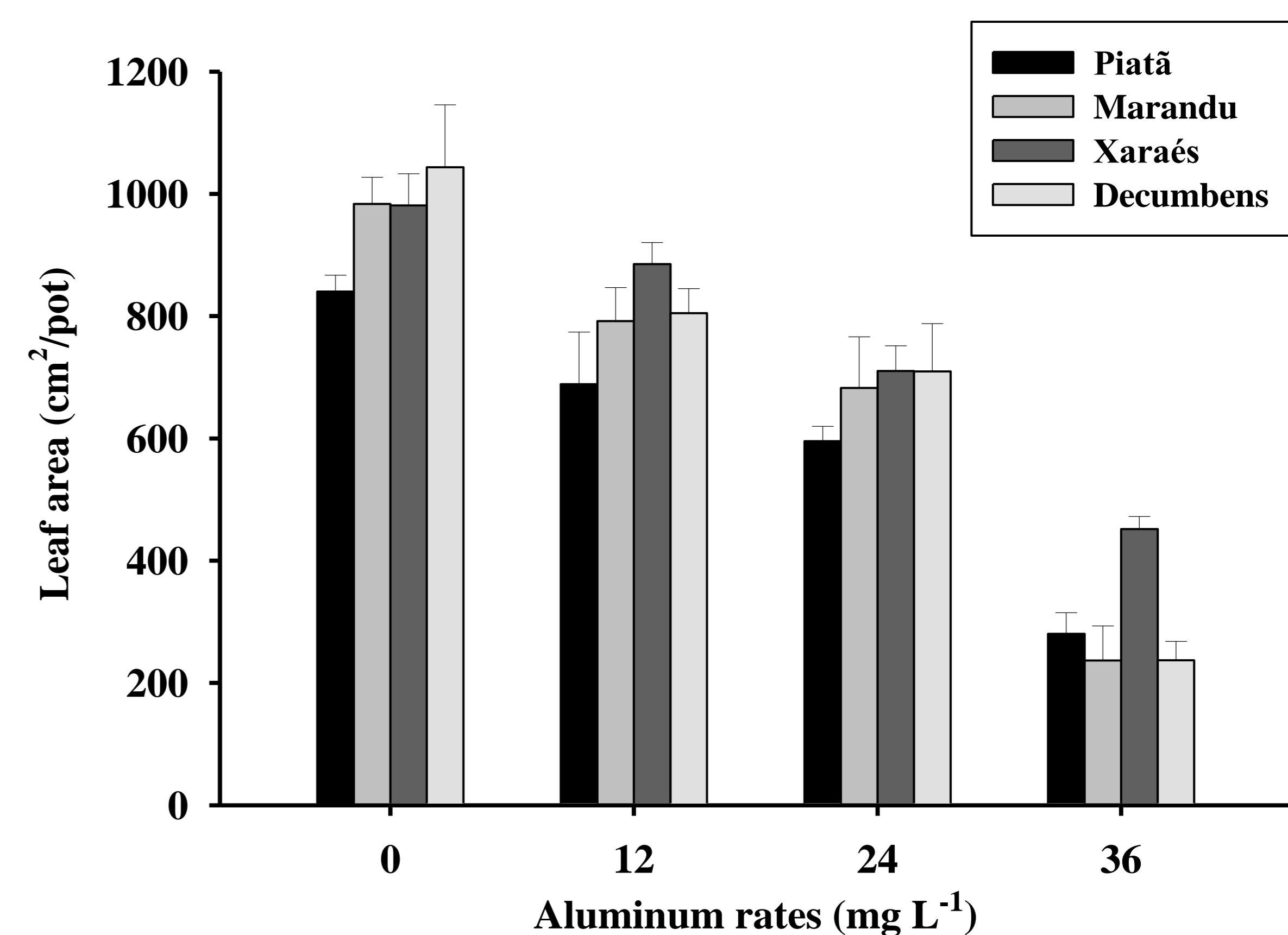


Figure 2: Leaf area of the four *Urochloa* genus subjected to Al rates in the nutrient solution (Tukey test at 5%).

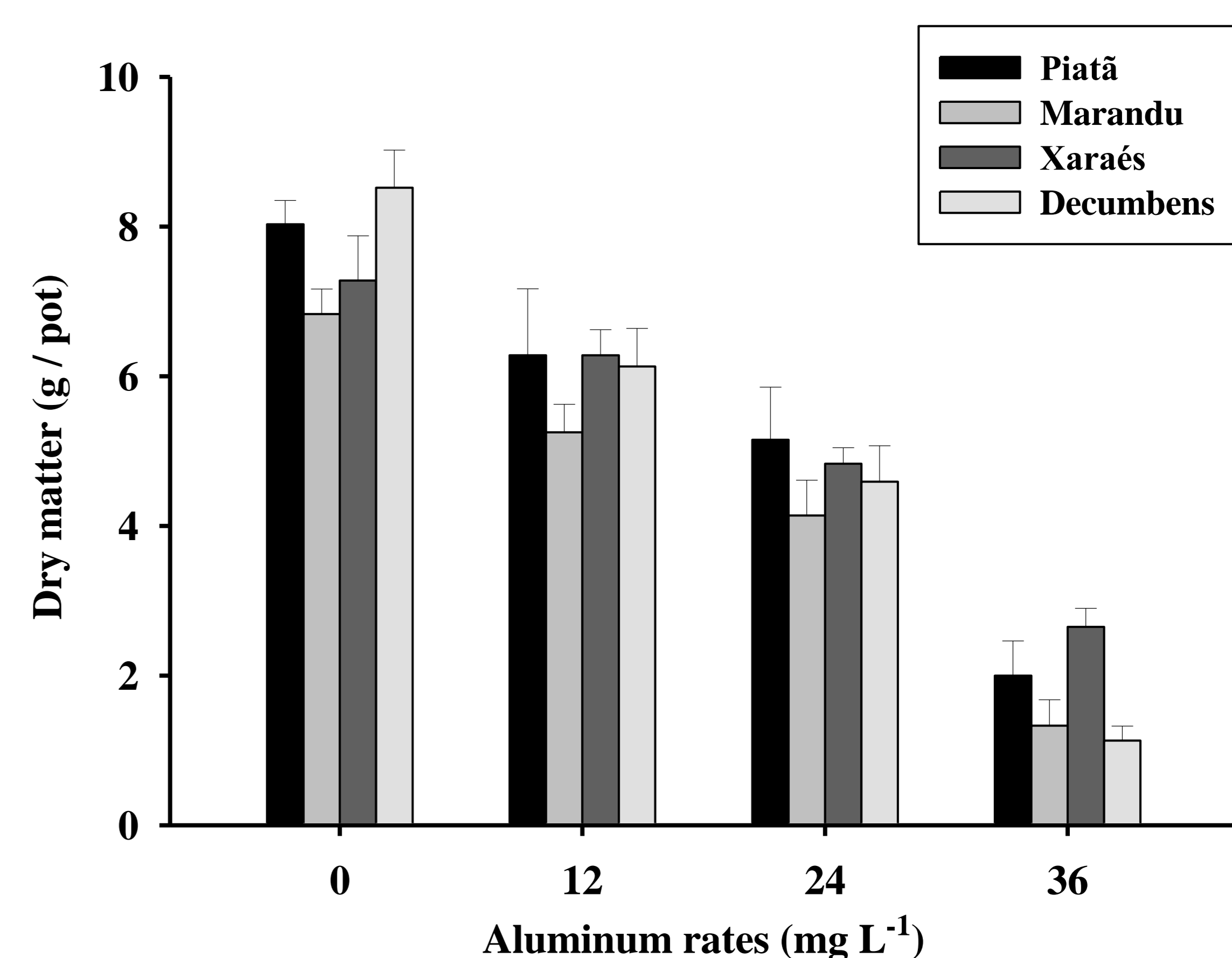


Figure 3: Dry matter of the four *Urochloa* genus subjected to Al rates in the nutrient solution (Tukey test at 5%).

Conclusions

It was observed a high degree of correlation between leaf area and dry matter as a function of the rates of Al in nutrient solution. Concerning the leaf area, *Urochloa brizantha* cv. Xaraés showed greater value than others cultivars at the highest Al rate, as well as for dry matter, *Urochloa brizantha* cv. Xaraés had better performance than *Urochloa brizantha* cv. Marandu and *Urochloa decumbens*.

Financial Support:

