

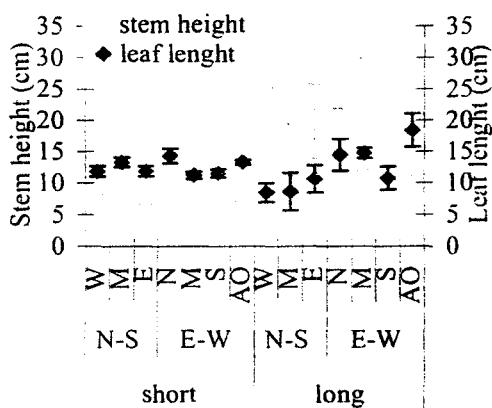
# Evolution and ageing of *Brachiaria brizantha* pasture component in a silvopastoral system

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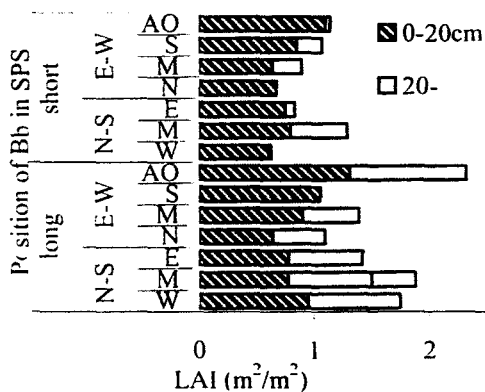
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**Introduction** The main causes of the decline of *Brachiaria* pasture in the tropics are lack of maintenance, fertilisation and excessively high animal stocking rates (Boddey *et al.*, 2004). *Brachiaria brizantha* has two predominant morphological forms: 1) relatively high stems with grouped tillers at a high position constructed from short leaves (bunch type); 2) low stems with long leaves, which in time evolve into the first type (Kanno *et al.*, 1999). The concept of *Brachiaria* management involves animals entering to commence grazing when the pasture is 50-60cm high and being removed at 25-30cm, leaving a regrowth period of at least 30 d (Alves *et al.*, 1996). The aim of this study was to determine the impact of two distinct regrowth periods (short versus very long) on the morphology of *Brachiaria brizantha* Hochst. ex A. Rich. (Bb), in a silvopastoral system (SPS) with *Corymbia citriodora* Hook. (Cc).



**Figure 1** Morphology of Bb



**Figure 2** Leaf area index per layer

At these sample points, the inter-specific competition for the light is less important, but intra-specific competition partially blocks tillering close to the soil surface.

**Conclusions** Long grass regrowth induced morphological changes in Bb (appearance of bunch type tillers) which irreversibly led to ageing of the Bb canopy. These results question the concept of allowing *Brachiaria* regrowth to a canopy height of 60cm.

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