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III.7 Botanical composition and forage quality of enriched and traditional pastures in northeastern Pará, Brazil

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The integration of cattle into the traditional slash-and-burn cycle in the humid tropics, where secondary vegetation (“capoeira”) plays an important role to recuperate the soil and maintain biodiversity, might be an alternative to meliorate the land-use system. Two alternatives are being tested in comparison to the traditionally separated grass-only (*Brachiaria humidicola*) pasture (PT), namely a *B. humidicola* pasture enriched with controlled re-growth of the natural capoeira (PC) and one enriched with legumes, *Cratylia argentea*, *Chamaecrista rotundifolia* var. *grandiflora* and *Arachis pintoi* (PL). The nine experimental plots of 0.34 ha each were established on a small-holder field in the municipality of Igarapé-Açu (47°30'W/1°2'S) which had been cultivated with annual crops (maize, cassava) for 1.5 years preceded by the slash-and-burn of a 12-year capoeira. Initially 3 and later 2 crossbred male yearlings with an initial weight between 165 and 250 kg were rotated among the 3 replications of each treatment. Forage availability was measured at the beginning of each grazing period and the botanical composition of the diet estimated by micro-histological analysis of faeces collected at the end. In the first phase of the experiment (22.3.2000 – 1.3.2001) the average period of grazing and resting were 23 and 46 days, maintaining a mean stocking rate of 1.5 animal units (1 AU = 450 kg) ha⁻¹. The average daily weight gain (g) was 475, 520 and 590 on PC, PL and PT, respectively. The availability of forage was 5.7, 5.0 and 5.3 t total dry matter (DM) ha⁻¹, of which 2.1, 1.8 and 1.9 t DM ha⁻¹ were stems, 0.9, 0.9 and 0.9 t DM ha⁻¹ leaves and the rest was litter on PC, PL and PT, respectively. In all treatments, grass dominated the cattle diet. Legumes contributed 14.6 % to the diet on PL, Capoeira species 36.8% on PC. In total 29 different Capoeira species were found in the faeces of the animals. These preliminary results show that both alternative types of pastures allowed to maintain a higher stocking rate than 1 AU ha⁻¹, which is common for the Amazon region. However, the daily weight gains were highest on the well managed PT.