Summary

Dry matter (DM) production and chemical composition of the native grassland and *Brachiaria humidicola*, as affected by rainfall distribution and regrowth interval, were evaluated in Amapá, Brazil. The experiment was carried out in an area representative of the well-drained Cerrado ecosystem where the predominant climatic type is rainy tropical (Ami, Köppen classification), with 2500 mm of rainfall, 26 °C temperature, and 80% relative humidity. Yellow Latosol (Oxisol) predominates in the ecosystem.

A randomized complete block design in a split-split plot fashion was used, where *B. humidicola* and the Cerrado grassland were the main plots, seasons (rainfall distribution) were subplots, and cutting intervals were sub-subplots.

The results indicate that, under these ecosystem environmental conditions in Amapá, yield potential of *B. humidicola* is considerably higher than that of the native grassland. Crude protein (CP) content in *B. humidicola* was very low (< 4%) and similar to that of native pasture. Considering the DM yield and chemical composition of the forage at different ages, *B. humidicola* and the native pasture should be used more under a forage availability basis than under a chemical composition basis. Crude protein, phosphorus, and potassium levels tended to follow yearly rainfall distribution in both types of pastures.