Summary

The experiment was established on an Oxisol, at the Dairy Cattle Research Center (EMBRAPA), Coronel Pacheco, MG, Brasil, to ascertain the forage quality of accessions of the genus *Brachiaria (B. decumbens* BRA-000116; *B. decumbens* BRA-000141; *B. brizantha* BRA-000337; *B ruziziensis* BRA-000272 e *B. humidicola* BRA-000213), under three levels of applied nitrogen (N_0 = zero N; N_{75} = 75 kg/ha/year; and N_{150} = 150 kg/ha/year). Both in the wet and the dry season the crude content of all accessions of *Brachiaria* increased with increasing level of applied nitrogen. The lowest crude protein content was that of *B. humidicola.* The nitrogen treatments had no effect on the concentrations of phosphorus, calcium and potassium in the forage. The concentrations of phosphorus and potassium of the *Brachiaria* accessions were similar and adequate to meet the plant and animal requirements. In general, the calcium concentration in the forage was low, particularly in *B. brizantha* and *B. humidicola.*