

Summary

Brachiaria decumbens is a tropical forage grass that adapts well to acid infertile soils. Nevertheless, problems related to its nutritive quality arise during later growing stages.

In the Oxisol regions of El Nus, Antioquia, Colombia, located at 1045 m.a.s.l. and reporting an average annual rainfall of 2000 mm with an average temperature of 25°C, tests were carried out to evaluate levels of crude protein (CP), *in vivo* dry matter disappearance (DMD), digestibility of crude protein (DCP) and daily consumption of dry matter (DMC) on a pasture of *B. decumbens* with growth ages of 30, 45, 60, and 75 days.

African sheep kept in metabolic crates were used in the testing. They had an adaptation period of ten days and measurements were taken over a 7-day period. Levels of DMD and DCP were based and calculated on the relationship between the quantity of nutrients supplied by the forage and the amount found in animal feces. DMC was based on food-on-offer accepted and rejected.

Results revealed CP levels progressively decreasing between 30 days (9.28%) and 75 days (4.56%), *in vivo* DMD and DCP levels decreased ($P < 0.01$) after 30 days. Furthermore, a positive relationship ($r = 0.90$) between DMC and *in vivo* DMD was found.