

# Studies On Multipurpose Fodder Trees And Shrubs In West Africa: Variation In Determinants Of Forage Quality In Albizia And Paraserianthes Species

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## Abstract

We investigated variation in forage production, in sacco dry matter (DM) and nitrogen (N) degradations, and in vitro gas production characteristics of four *Albizia* (*A. lebbeck* N 864, *A. procera* N 865, *A. saman* N 825) and *Paraserianthes falcataria* (N 783) provenances obtained from The Nitrogen Fixing Tree Association. After one year of establishment forage production was assessed by harvesting trees at 0.5 m above ground in the main wet (April–August) minor-wet (September–November) and dry (December–March) seasons at Ibadan, southwestern Nigeria. Forage samples from the main-wet and dry seasons were incubated for 6, 12, 48, 72 and 96 h in rumen-fistulated cattle to estimate in sacco DM and N degradation characteristics. In vitro gas production was estimated over 3, 6, 12, 24, 48, 72 and 96 h of incubation. Forage production of *A. procera* was significantly higher than the other species in all seasons. Cell-wall components were comparatively higher in *A. procera* than the other species. Potential DM and N degradations of *A. lebbeck* and *A. saman* were significantly higher than *P. falcataria* and *A. procera*. The results suggest that *A. lebbeck* and *A. saman* provenances used in this study have relatively higher feed value than *A. procera* and *P. falcataria*.

Key words forage - gas production - rumen degradation - season