



Variation of the chemical composition of four forage shrubs (*Albizia lebbbeck*, *Leucaena leucocephala*, *Morinda lucida* and *Senna siamea*) in dry season in southeast of Gabon

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ABSTRACT

Objective: This study is conducted, to know the chemical composition at different periods of the dry season, of four major fodder shrubs (*Albizia lebbbeck*, *Leucaena leucocephala*, *Morinda lucida* and *Senna siamea*), used to supplement poor fodders in animal feed, in the conditions of southeast Gabon.

Methodology and results: The leaves of each species were harvested at the beginning, at mid-season and at the end of dry season. They were dried and crushed to determine their chemical composition. The results showed that, with *A. lebbbeck*, the levels of DM obtained at mid-season and the end that one, were higher ($P < 0.05$) than at the first harvest. The levels of DM and CP obtained at mid-season and the end of dry season, with *L. leucocephala* were higher ($p < 0.05$) than those observed at beginning. Variations of DM and CP levels of *M. lucida* leaves and DM content of *S. siamea* leaves were not significant ($p > 0.05$). In addition, catechic tannins were not found in the leaves of *S. siamea*. However, the variations of this tannins type, observed in the leaves of *L. leucocephala*, *M. lucida* and *A. lebbbeck* were not significant ($p > 0.05$). On the other hand, the contents of gallic tannins measured in the leaves of *S. siamea* decreased at the end of the dry season ($p < 0.05$).

Conclusion: Finally, it appears that these species showed few variations in protein, cellulose and tannins throughout the dry season. Taking into account the results obtained, the shrub species studied could constitute good forage in supplementation of poor grass in the dry season. However, *L. leucocephala* and *S. siamea* should be used with much moderation for the feeding of ruminants, given the presence of gallic tannins in their leaves. Nevertheless, it would be important to study the digestibility of these forages in the dry season.

Key words: legumes, *fabaceae*, *rubiaceae*, ruminants, tannins.