

Caracterización química de especies arbóreas tropicales con potencial forrajero en Colombia

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Summary

In a study to define the potential of different tree species as a source of feed for ruminant animals, immature and mature leaves were collected from 11 leguminous trees (*Gliricida sepium*, *Erithryna fusca*, *Clitoria fairchildiana*, *Calliandra calothyrsus*, *Leucaena leucocephala*, *Prosopis juliflora*, *Samanea saman*, *Cassia siamea*, *Cesalpineia pelthosperoides*, *Cassia nodosa* and *Delonix regia*) and four non-leguminous trees (*Guazuma ulmifolia*, *Trichantera gigantea*, *Cordia alliodora* e *Hibiscus rosasinensis*), grown in the Cauca Valley (Colombia) during the wet season. The chemical composition (crude protein-CP, neutral detergent fiber-NDF, acid detergent fiber-ADF, condensed tannins-CT, and astringency) and in vitro digestibility (IVDMD) of forage was determined in freeze-dried samples. Quality parameters varied greatly among the different species and maturity. In general, mature leaves had lower CP content, higher fiber content and also lower IVDMD compared with immature leaves. As the best legumes were found *L. leucocephala*, *G. sepium*, *C. siamea* and *P. juliflora* with IVDMD ranged from 55 to 69% and CP contents from 15 to 31%. Species with high concentration of CT such as *C. fairchildiana*, *C. calothyrsus*, *C. pelthosperoides*, *C. nodosa* and *D. regia* were characterized by the lowest IVDMD (range 32 to 51%). Non-leguminous such as *H. rosasinensis* y *T. gigantea* had the highest IVDMD (65 and 80%). *T. gigantea* presented the highest CP content (18.5%), whereas, *G. ulmifolia* had the highest NDF (55%) and ADF (35%) contents. The IVDMD in leguminous and non-leguminous species was associated to ADF content ($r=-0.56$ and -0.82 , respectively). The CT content, a fraction commonly associated with low IVDMD in legumes, explained only the 16% of its variability.