Summary

An experiment was carried out at the CIAT-Quilichao research station to determine the effect of different levels of supplementation of the legume *Cratylia argentea* on intake, digestibility and nitrogen utilization by sheep fed a basal diet of *Brachiaria dictyoneura* hay. The experiment consisted in feeding hay of mature *B. dictyoneura* supplemented with four levels (0, 10%, 20%, and 40% of the diet; T1, T2, T3, and T4, respectively) of fresh *C. argentea* leaves to eight African-type wethers arranged in a replicated 4 x 4 latin square reversible design. Results were analyzed using

the ANOVA procedure of SAS. Supplementation with 20% and 40% of *C. argentea* significantly increased total intake of DM by sheep as compared to T1 (24.7 and 25.5 vs. 21.6 g/kg BW/d, $P < 0.05$, respectively). On the other hand, DM (48.8%) and OM (55.5%) ruminal digestibilities, and NDF (63.7%) and ADF (59.0%) total tract digestibilities were significantly higher ($P < 0.05$) to those observed in the other treatments, probably related to the higher contents of indigistible ADF (IADF 38 ± 3.6) of the legume as compared to the grass. It is feasible that the significant increments in ruminal NH3 BN concentrations in response to the *C. argentea* supplementation (3.0, 5.3, 7.5, and 8.7 mg/dl for T1, T2, T3, and T4, respectively) were efficiently utilized by rumen microbes for bacterial protein sinthesis. However, supplementation with *C. argentea* resulted in a significant increment in the flow of N to the duodenum ($P < 0.05$), both from the diet and bacterial origin. Likewise, the apparent absorption of N in the lower tract increased ($P < 0.05$) as the level of *C. argentea* increased in the diet (4.7, 6.0, 7.3, and 8.2 g/d for T1, T2, T3, and T4, respectively). Results suggest that supplementing low quality grass hay with *C. argentea* did not increase intake of digestible nutrients mainly because of the high content of IADF of the legume. However, supplementations with *C. argentea* greatly improved the protein status of the animals.