

Summary

The use of sheep and cattle to evaluate the productivity of associated pastures of grasses and legumes under grazing was studied in a comparative manner on an Oxisol of the CIAT-Quilichao station. In the first phase of the experiment, the associations *Brachiaria dictyoneura* CIAT 6133/*Desmodium ovalifolium* CIAT 350, and *Andropogon gayanus* CIAT 621/*Centrosema acutifolium* CIAT 5277 were used. Forage allowance for sheep and cattle were, respectively, a low of 3 to 5 kg of green DM/100 kg of live weight and a high of 6 to 8 kg of green DM/100 kg of live weight. African sheep with an initial live weight of 18 to 20 kg were used, and they were replaced when they weighed 30 kg. The cattle were zebu with an initial live weight of 180 to 200 kg, and they were replaced when they reached 300 kg. On the associations grazed with sheep, the treatment with a low assignment of forage was distributed on four plots of 153 m² each, and the treatment with a high assignment was on four plots of 250 m² each. In the treatment with cattle, these plots were 612 m² and 1000 m², respectively.

For each association, the available forage, the botanical composition, and the nutritive quality were measured on the 28th and 35th days of each rotation. In order to measure the selectivity and quality of the chosen diet, esophageal-fistulated steers and sheep were used.

In the second phase of the experiment, the difference in legume selection by the two kinds of animals was measured. The associations *A. gayanus* CIAT 621/*C. acutifolium* CIAT 5277 and

5568, *A. gayanus* CIAT 612/*C. macrocarpum* CIAT 5713, and *B. dictyoneura* CIAT 6133/*D. ovalifolium* CIAT 350 were used, with assignments of forage similar to those of the first phase of the experiment.

The results showed that the associations grazed by sheep presented less availability of total DM than those grazed by cattle. Both kinds of animals selected more leaves than stems of grass. The fistulated sheep and cattle with little previous experience selected similar levels of *D. ovalifolium*, but in less proportion to what was present in the pasture. The sheep, however, selected a larger proportion of *Centrosema* than the cattle, this proportion being greater than what was present in the pasture. The sheep selected diets with a larger content of CP, but with similar IVDM digestibility to what the cattle consumed.

The results permit the conclusion that, because of differences in selection habits, it is not recommended to evaluate associated pastures with sheep when they are designed to be used with cattle.