

Summary

An experiment was conducted on an acid, infertile Oxisol in Carimagua, Llanos Orientales of Colombia, to determine the effect of the simultaneous sowing of seven grasses and seven legumes in mixed cropping with upland rice. Furthermore, forage production was compared after establishment of the species via mixed cropping with that via conventional, pasture-only, establishment.

Rice yields in the mixed-cropping system were not affected by any of the 14 forage species and varieties; they varied between 2.3 and 3.0 t/ha compared with 2.5 t/ha of the control (rice only). Forage production was only for the grasses somewhat higher in the mixed-cropping treatment compared with the pasture-only treatment. The most productive species were *Desmodium ovalifolium*, *Andropogon gayanus*, *Brachiaria decumbens*, *B. brizantha*, *Stylosanthes capitata* y *Pueraria phaseoloides*. Nitrogen, P and Ca concentrations in the forage were higher in the legumes than in the grasses; for N and Ca differences were as high as 200-600%.

It is concluded that there is a wide range of forage grasses and legumes suitable for pasture establishment in the upland Llanos Orientales through mixed cropping with upland rice. In both the mixed-cropping and the pasture-only treatments the most productive species were the same. This suggests that for the identification of forage germplasm for mixed-cropping with upland rice in the Colombian Llanos no special evaluation and selection strategy seems to be required beyond the conventional screening for acid-soil adaptation and low nutrient requirements.