

Summary

Beginning in 1980, three grass/legume associations, *Andropogon gayanus*/*Stylosanthes guianensis*, *Brachiaria decumbens*/*Desmodium ovalifolium*, and *Panicum maximum*/*Pueraria phaseoloides* were evaluated in Yarimaguas, Peru (5°56'S, 76° 5'W; 26°C mean temperature, 2300 mm rainfall, 18 m.a.s.l.). The soil was classified as an Ultisol Typic Paleudult. Two additional associations, *A. gayanus*/hybrid *Centrosema* and *B. humidicola*/*D. ovalifolium*, were incorporated in 1981. All the pastures were established with an initial fertilization of P (22 kg/ha), K₂O (40 kg/ha), Ca (250 kg/ha), Mg (10 kg/ha), and S (20 kg/ha). The same fertilization, with the exception of Ca, was repeated yearly.

Continuous grazing at 4.4 animals/ha, mean liveweight 350 kg, was used during the first year.

Alternate grazing, 42 d on/42 d off, was used in the second and subsequent years; grazing pressure was maintained constant at the rate of 3 kg green dry matter per 100 kg liveweight.

After four years, all the associations tested persisted well, although with differences in the grass/legume balance. These differences were due to difficulties in the establishment of some species and to differences in palatability. The most productive associations were *A. gayanus*/hybrid *Centrosema* (639 kg LW/ha), *B. decumbens*/*D. ovalifolium* (640 kg LW/ha), and *A. gayanus*/*S. guianensis* (512 kg LW/ha). The *B. humidicola*/*D. ovalifolium* pasture also yielded well, but a longer observation period is required to confirm its potential.