

Summary

Choice of sampling method can exert a great influence on estimates of pasture quality. Single paired samples of four tropical pastures were taken to examine the effect of method of sampling on chemical composition. One sample was taken at a fixed height and a second was taken in a way that simulates selective grazing. Samples of paja peluda (*Trachypogon* sp.), pasto cv. Sabanero (*Andropogon gayanus*), barrera (*Brachiaria decumbens*), and pasto swazi (*Digitaria swazilandensis*) were taken on two farms in southern Anzoátegui state, Venezuela. The samples simulating grazing contained more crude protein and minerals and less ADF, NDF, and lignin than the samples cut at a fixed height. Large differences between species were also evident. Swazi had about twice as much crude protein as paja peluda (9.9% compared to 5.2%). Taking samples at a fixed height underestimated crude protein by 21% to 35% and ADF by 3% to 20% compared to samples simulating grazing.