

Summary

A grazing trial was conducted in the East Colombian Llanos: (1) to measure short-term ingestive behaviour and daily herbage intake of steers on pastures of *Brachiaria humidicola* alone or in association with *Arachis pintoi*, at low (2 animals/ha) and high (4 animals/ha) stocking rate, and (2) to relate these animal responses to sward characteristics (sward height and herbage mass). Short-term intake (bite mass x rate of biting) and daily herbage intake were measured using four oesophageal and rumen fistulated steers, which grazed the experimental pastures in a 4 x 4 Latin square design. Grazing cycles were carried out in January and February 1994 (dry season) and in April and May 1994 (rainy season). Daily herbage intake was calculated using faecal output and digestibility of extrusa samples. To estimate faecal output a pulse dose of an external marker (Yb) was used.

Sward height and herbage mass differed considerably between pastures grazed at contrasting

stocking rates. However, during the rainy season, short-term intake was not affected ($P > 0.05$) by these sward characteristics. In contrast, during the dry season, short-term intake was partially related to sward height ($r^2 = 0.37$) and herbage mass ($r^2 = 0.36$). As sward height increased from 6.5 to 15.0 cm and herbage mass from 840 to 2300 kg DM/ha, short-term intake increased exponentially from 0.6 kg organic matter per hour (OM/h) to an asymptotic value of 1.0 kg OM/h. Daily herbage intake was not affected ($P > 0.05$) by sward height and herbage mass, when forage quality was adequate (i.e. grass-legume pasture). However, when forage quality was low (i.e. grass-alone pasture), daily herbage intake was 17% lower in the pasture with lower sward height and herbage mass (i.e. high stocking rate). Daily intake was not related to bite mass ($r = -0.20$, ns) or short-term intake ($r = -0.22$, ns). This indicates that whenever the application of this methodology relies with the assumption that short-term rate of intake reflects the daily herbage intake, the method should be treated with caution unless there is good evidence to support the assumption.