# Estimation of intake and digestibility of kleingrass from in situ parameters measured in sheep

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The voluntary intake and digestibility of kleingrass (*Panicum coloratum* cv. Verde) were measured in seven periods, comprising one full year. The forage was offered twice a day *ad libitum* to seven rams, fitted with faeces collection bags; each experimental period was composed of 8 days for adaptation and 8 days for collection of data. The dry matter (DM) intake (DMI) varied from 36.1 to 64.9 g/kg $M^{0.75}$, the digestible dry-matter intake (DDMI), from 17.4 to 41.9 g/kg $M^{0.75}$ and the *in vivo* dry matter apparent digestibility (DMD), from 0.471 to 0.667.

Daily samples of offered forage were taken and pooled subsamples from each of the seven periods were incubated in nylon bags in the rumen of three Hereford steers. The data were fitted to the exponential equation: $p = a + b\ (1-e^{-ct})$ to estimate **p** (the proportionate loss of DM at time **t** of incubation); effective degradability (ED) and lag time (L) were also estimated.

The parameters obtained in situ were related to the *in vivo* results by simple and multiple regression. The correlation coefficients of the rate of degradation (c) and ED with DMI, DDMI and DMD were, respectively, 0.96 and 0.97; 0.97 and 0.96; 0.86 and 0.88. By including a, b, c and L into a multiple regression analysis, the coefficients of determination ($R^2$) were: DMI: 0.99; DDMI: 0.99 and DMD: 0.91. Within the conditions of this study, the parameters obtained in situ were reasonable estimators of voluntary intake and digestibility.

**Key words**: Intake, digestibility, warm-season grass, rumen degradation, correlation.