

Studies in fibre digestion and passage rate of liquid and solid in cattle and buffaloes

ABSTRACT

Rumen liquor characteristics and disappearance rate of dry matter were studied in Kedah-Kelantan cattle and swamp buffaloes fed grass of rice straw-based diet. Cobalt-EDTA and chromium mordanted fibres prepared from the faecal material were used to determine the liquid and solid particles movement in both animal species fed with rice straw. Swamp buffaloes showed a more intense rumen fermentation activity than Kedah-Kelantan cattle when both species were fed straw-based diet. The buffaloes also demonstrated faster rates of grass and straw degradation in situ. The fluid outflow rate from the rumen of buffalo (1.06 ± 0.19 l/h) was observed to be slower than that of cattle (1.55 ± 0.01 l/h). No significant differences between cattle and buffaloes were observed in rumen fluid volume and passage rate of small particles from the rumen.

Keyword: Fermentation; Feed degradation; Rumen volume; Passage rate; Cattle; Buffaloes