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Urinary excretion of purine derivatives (PD) of local cattle at three levels of feed intake

The objective of the present experiment was to evaluate the applicability of purine derivative (PD) method for local cattle. In the preliminary phase of the study, three bull calves (average weight 104kg0 were individually penned in metabolic crates and fed *ad libitum* with a diet consisting of 70% grass hay and 30% fresh *Gliricidia sepium*. After four-week feeding period, the voluntary (ad libitum) intake (VI) was estimated as 3.02kg dey matter/head/day. In the main experiment, 3x3 Latin square design was adopted and animals were fed at 3 fixed dietary levels 995%, 80% of VI). Feed intake, total output of feaces, total exceretion of urine/animal day were determined during the last ten days of each four week feeding period. Feed and feaces samples were analyzed for dry matter, organic matter and nitrogen. Urine samples were analyzed for nitrogen and PD (allantoin and uric acid).

The average dry matter and organic matter digestibilities were 49%, 55%,47% and 43% , 50% and 40% for 95%,80% and 60% levels of VI respectively. The endogenous PD excretions were 1.387 ±0.133, 1.5333± 0.133 and 1.352 ±0.133 mmol/$kg^{0.75}$ day for 95%, 80% and 60% levels, respectively. The proportion of allantoin from total PD was 80% and was compared to the range previously observed for *Bos Tra*urus cattle. Excretion of uric acid were 0.350, 0.304 and 0.324 mmol/$kg^{0.75}$ /day for 95% 80% and 60% levels respectively The correlation between PD excretion rate and digestible organic matter intake was non-significant due to high variability amongst local animals.