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The use of chromic oxide as an index for determining the digestibility of feed constituents in buffalo calves

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ABSTRACT : Six murrah buffalo calves divided into two groups were fed wheat straw and concentrates mixture along with green Lucerne. The average dry matter (DM) intake per 100 kg body weight (2.94 ± 0.36 kg) and g / unit metabolic size ($g/w^{0.75}$) (119.01 ± 7.54 g) were significantly higher ($P < 0.05$) in the animals of group II than the values obtained in the group I (2.25 ± 0.32 kg and 95.79 ± 10.03 g). The intake of digestible crude protein (DCP) g / unit metabolic size was lower (6.57 ± 0.57 g) in the males group than the females group (7.06 ± 0.71 g) whereas, the intake of total digestible nutrients (TDN) g / unit metabolic size was higher in the males group (77.79 ± 12.27) than the females group (68.02 ± 13.38). The differences in the intake and utilization of these nutrients between two groups of animals were statistically significant. The average digestibility co-efficients of DM, crude protein (CP), ether extract (EE), crude fibre (CF), nitrogen-free extract (NFE), total carbohydrates (TCHO), total ash, insoluble ash, neutral detergent fibre (NDF), acid detergent fibre (ADF) were 62.41 ± 1.13 , 69.57 ± 0.89 , 54.13 ± 1.81 , 63.50 ± 0.86 , 66.74 ± 2.79 , 65.61 ± 3.29 , 35.40 ± 2.08 , 54.27 ± 1.38 and 74.73 ± 2.46 per cent in the animals of group I and 58.29 ± 1.44 , 66.02 ± 0.36 , 50.34 ± 0.49 , 61.10 ± 0.79 , 63.58 ± 1.80 , 63.38 ± 2.41 , 31.79 ± 1.39 , 51.68 ± 0.71 and 68.64 ± 1.97 per cent in the animals of group II. Among the nutrients, the males digested more ($P < 0.05$) crude protein than the females.

KEY WORDS : Digestibility, Chromic oxide, Buffalo, Group, Faeces

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