



Rice and Wheat stovers nutritional values comparison for Malian Sahelian zone dromedary

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Abstract

The dromedary, known as a desert and semi-desert areas animal, is beginning to adapt to southern Sahelian agro-pastoral zone, where crop residues (stovers) from rice and wheat constitute its important feed elements. However,

nutritional values of these stovers are not available for the dromedary. To fill this gap, an experiment was carried out on 16 adult male dromedaries, aged around 7 years, to assess the quantity, the digestibility and the nutritional value of rice and wheat ingested stovers. Test dromedaries were divided into two batches of 8 heads each of which, batch 1 weighed on average 424.2 ± 5.1 kg and batch 2 426.3 ± 10.7 kg. Batch 1 was fed with rice, while batch 2 was on wheat stovers. The experiment lasted 28 days, including 15 days of adaptation, 7 days of feeding and 6 days of digestibility measurement. Total faeces collection method was used. Dry matter ingested was higher ($p = 0.000$) for rice stover than wheat one (4.5 kg against 2.4 kg). In contrast, the amount of water consumed per kg of dry matter ingested was higher ($p = 0.000$) for wheat stover (15.1 l) than for rice (7.6 l). Protein coefficients digestibility ($49.9 \pm 4.4\%$), cellulose ($62.9 \pm 4.0\%$) and energy (62.2 ± 2.8) were higher for rice than wheat ($27.0 \pm 2.4\%$; $46.5 \pm 2.3\%$ and $54.3 \pm 1.6\%$ respectively) stover. However, the metabolizable energy concentration was similar between stovers (7.6 ± 1.1 MJ / kg DM for rice and 7.2 ± 0.1 MJ / kg DM for wheat). The metabolizable energy per $\text{kg}^{0.75}$ consumed per day was 0.081 MJ for rice and 0.077 MJ for wheat, stover. These results will improve dromedaries' rations preparation in their new agro-pastoral environments.

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