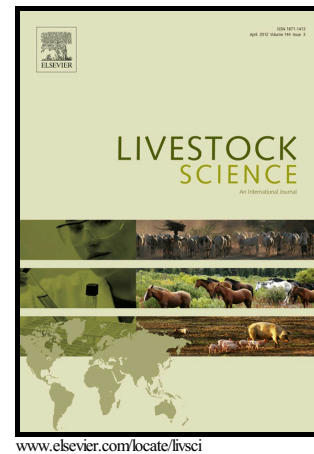


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Feeding behaviors, metabolism, and performance of primiparous and multiparous dairy cows fed high-concentrate diets

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ABSTRACT

Currently, there is a trend in management practices to feed a high concentrate diet to sustain a high level of milk production. The objective of this study was to identify the differences between primiparous (PP) and multiparous (MP) dairy cows fed a high-concentrate diet on feed intake and behavior, rumen pH and rumen fermentation, blood metabolites, inflammation, and milk production and efficiency. Twenty-four PP (DIM = 114 ± 20 ; 43.2 ± 10.6 kg/d of milk; mean \pm SD) and fifty-four MP (DIM = 99 ± 30 ; 53.2 ± 13.6 kg/d of milk) cows were fed a high-concentrate diet consisting of 35% forage and 65% concentrate mix. The study lasted for 24 d, which consisted of 14 d of environmental adaptation followed by 10 d of data collection. Rumen pH was measured via rumenocentesis for all cows and reticuloruminal pH was measured for a subset of animals (4 PP and 10 MP) using indwelling oral-administered sensors. The PP cows had greater sorting against long particles during the daytime, but greater sorting in favor of long particles at night. The dry matter intake (DMI) between 0 and 4 h after the morning feeding was

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