PEARL-MILLET GRAZING FOR DAIRY COWS RECEIVING TOTAL MIXED RATION

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The effects of inclusion of a tropical grass in dairy cattle diets, consisting exclusively of total mixed ration (TMR), deserves a more profound study. This work aimed to evaluate the milk production and composition from dairy cows receiving three nutritional strategies: 100% TMR (control group), 75% TMR + pearl millet grass (*Pennisetum glaucum* cv. Campeiro) and 50% TMR + pearl-millet grass. The TMR composition was corn silage + concentrated food in a 60:40 proportion. Nine multiparous Holstein and F1 Jersey × Holstein cows with 136±40 days in milk and 520±41 kg of body weight were distributed in an experimental design of 3×3 Latin-square. The pearl-millet was strip-grazed with pre- and pos-grazing sward height targets of 60 and 30 cm, respectively. The crude protein and neutral detergent fiber contents of the TMR were 149 and 340 g kg DM⁻¹ and for the pearl-millet grass were 200 and 646 g kg DM⁻¹, respectively. The pre grazing herbage mass, pre- and pos sward height were similar between treatments 75 and 50% TMR, averaging 3508 kg DM ha⁻¹, 62 and 31 cm, respectively. The TMR intake in the control group was 20.7 kg DM cow⁻¹ and decreased to 14.8 and 10.9 kg DM cow⁻¹ in the 75 and 50% TMR groups. The 4% fat corrected milk production decreased (P<0.05) from 26.7 kg cow⁻¹, in the control group, to 25.2 and 24.4 kg cow⁻¹ in the 75 and 50% TMR groups, respectively. The milk fat and protein contents were similar between treatments, averaging 46 e 33 g kg⁻¹, respectively. The results showed that dairy cows grazing pear-millet grass and receiving 50% of TMR, when compared to dairy cows receiving only TMR *ad libitum*, may maintain up to 90% of milk production without alterations in milk fat and protein contents.

**Keywords:** Milk production, Milk composition, *Pennisetum glaucum.*