CELLULOLYTIC ENZYME IN DIETS BASED ON SUCARCANE ON CORN SILAGE FOR DAIRY HEIFERS: DRY MATTER AND NUTRIENTS INTAKE

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The aim of this study was to evaluate the dry matter and nutrients intake in dairy heifers supplemented with cellulolytic enzyme (Fibrozyme®) in diets based on sucarcane or corn silage.Eight animals with average body weight of 160.25 ± 15.56 kgwere used in two 4x4 Latin squares, in 2x2 factorial arrangements.The experimental period was 18 days with 12 for adaptingexperimental diets, 6 for data collection, and 5 days of wash out.The experimental diets were: Corn silage without Fibrozyme® (CS); Sugarnace silage withoutFibrozyme® (SS); Corn silage withFibrozyme® (CSF); Sugarcane silage withFibrozyme® (SSF).The animals receive Fibrozyme® 20g day^{-1}.Diets were formulated to daily gain of 800.0 g d^{-1}, isonitrogenous and same neutral detergent fiber concentration.Samples of all diet ingredients (0.5 kg) and orts (12.5% of total daily orts) from each heifer were collected during the last 6 days of each period and combined into one composite sample of ort for each cow and one sample of silage. Samples were analyzed to determine dry matter (DM), organic matter (OM), crude protein (CP), ether extract (EE), neutral detergent fiber (NDF), acid detergent fiber, lignin and ash.Data were submitted to analysis of variance using the PROC MIXED by SAS, version 9.0. Cellulolytic enzyme (Fibrozyme®) not influenced dry matter and nutrients intake.Heifers feed sugarcane silage showed lower (P=0.001) dry matter intake compared with heifer feed corn silage (5.16 vs 7.64 kg day^{-1}), respectively. The same results were observed (P=0.001) for organic matter, crude protein, neutral detergent fiber, non-fiber carbohydrate and total digestible nutrients intake (kg day^{-1}).This is probably due to the physical limitation of feedintake for heifers, as sugarcane silage has a high content of indigestible fiber compared to corn silage. The amount of indigestible fiber and NDF in feed is directly related to the dry matter intake by ruminant animals, since high concentrations of these nutrients in food leads to decrease in the intake of dry matter by physical, chemical and metabolic factors. Cellulolytic enzyme (Fibrozyme®) notinfluenced dry matter and nutrients intake of dairy heifers based on sucarcane or corn silage diets.

Keywords: Carbohydrate metabolism. Fiber intake. Xylanase.

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