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CONSTRUINDO SABERES, FORMANDO PESSOAS E TRANSFORMANDO A PRODUÇÃO ANIMAL

IN VITRO DIGESTIBILITY AND CHARACTERIZATION OF THE CELL WALL OF HAY OBTAINED FROM TIFTON 85 GRASS CUT AT DIFFERENT TIMES

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Fiber is an important component in animal nutrition, and is related to digestibility and consumption. Feed digestibility may vary depending on its characteristics, on animal and feeding conditions. The objective was to evaluate the *in vitro* dry matter digestibility (IVDMD) and the characterization of the cell wall of hay from Tifton 85 grass (*Cynodon dactylon*), cut at different times of the day. Twenty-one plots of Tifton 85 grass of 4 m² each were used. The grass was cut on June 23rd of 2017, at 10 cm from the ground, when the grass was with 80 days of regrowth after a standardization cut. Three times of cut grass were evaluated, with seven repetitions each: 11:00 a.m., 2:00 p.m. and 5:00 p.m. The haymaking process lasted 72 hours, and after that period, samples of the hay were collected. The IVDMD trials took place at the Laboratory of Nutrition and Feed Analysis of the Londrina State University. Cellulose, acid detergent fiber (ADF), neutral detergent fiber (NDF), hemicellulose, lignin, acid detergent insoluble protein (ADIP) e neutral detergent insoluble protein (NDIP) contents were determined after analysis carried out at the Bromatology Laboratory of the University North of Parana – Arapongas. The data were submitted to analysis of variance and Tukey's multiple comparison test, both with a significance level of 5%. Cellulose, NDF, lignin, ADIP e NDIP contents of the hay were similar in relation to the time that the grass was cut, with means of 37.0, 3.2, 79.0, 0.9 e 3.6%, respectively. Grass cutting time caused changes on ADF and hemicellulose contents of the hay. The grass cut at 11:00 a.m. originated hay with higher ADF content (41.0%). The grass cut at 2:00 p.m. and 5:00 p.m. generated hay with ADF values of 40.2 and 39.6%, respectively. Although there were differences in ADF contents, IVDMD was similar in all hay, presenting an average value of 63.1%. The hemicelulose content was higher in grass hay cut at 5:00 p.m. (39.8%) than in those cut at 11:00 a.m. and 14:00 p.m. (37.9 e 37.7%, respectively). It is concluded that the time to cut the grass for hay production did not cause a change in digestibility, but altered the constitution of the cell wall of hay.

Keywords: ADF, *Cynodon dactylon*, fiber, haymaking, IVDMD