

CONSTRUINDO SABERES, FORMANDO PESSOAS E TRANSFORMANDO A PRODUÇÃO ANIMAL

QUALITY OF MIXTURE IN CONTAINING DIET IN THE FUNCTION OF THE LOADING ORDER AND MIXING TIME

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The aim of this research was to evaluate the homogeneity of total diet through the order of loading the ingredients in a wagon mixer and the mixing time of the diet used in a commercial feedlot. The treatments corresponded to two orders of loading and two mixing times: VOL-5, loading started with roughage and 5 minutes of mixing; VOL-4, loading started with roughage and 4 minutes of mixing; CON-5, loading started with concentrate and 5 minutes of mixing; CON-4, loading started with concentrate and 4 minutes of mixing. The statistical model used was a completely randomized design with a factorial scheme 2x2, with four repetitions. Ten diet samples were collected from the throughout the feed bunk line after each batch. The variables of interest analyzed using a portable NIRS were dry matter (DM), crude protein (CP), ether extract (EE) and neutral detergent fiber (NDF). An analysis was performed to evaluate if there was an effect of the order of sample collection on the concentration of the nutrient studied. The results showed that there was no evidence of differences in the variability among treatments for DM, CP and NDF. A significant effect of mixing time was observed on EE concentration ($P=0,0676$). For the effect of the order of sampling on the composition of the diet, there were no indications of changes in the composition of the analyzed variables throughout the feed bunk line. Based on the results observed, aiming to maximize the quality of the diets and optimizing the economic efficiency, the mixing time of 4 minutes is the most suitable for feedlot finishing diets similar to this study.

Keywords: total diet, nirs, nutrients, wagon mixer

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