

ASSESSMENT OF WEIGHT GAIN OF CROSSBRED HEIFERS FED DIETS CONTAINING DIFFERENT PROPORTIONS OF WHEAT SILAGE

AVALIAÇÃO DO GANHO DE PESO DE NOVILHAS MISTIÇAS ALIMENTADAS COM DIETAS CONTENDO DIFERENTES PROPORÇÕES DE SILAGEM DE TRIGO

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Abstract

Wheat cultivation for silage production is not a conventional practice in Brazil, but it can be an beneficial innovation for forage production in the offseason, with high nutritional quality and production cost lower than that of corn silage, making it an interesting alternative for animal production. The Agricultural Research Company of Minas Gerais (EPAMIG) developed a wheat cultivar, MGS Brilhante, which does not have a canopy and adapts well to different regions of the state. Thus, the objective of this study was to evaluate the weight gain of crossbred heifers kept in confinement and fed with different proportions of wheat silage (WT) and corn silage in the diet. The research was conducted in the Experimental Center of Sertãozinho of EPAMIG, in the municipality of Patos de Minas, Minas Gerais. Four diets were tested: 0% (WT0), 33% (WT33), 67% (WT67) and 100% (WT100) wheat silage addition. Twenty heifers with average age of 18 months were evaluated during 105 days, and weighing was performed on five dates, with average intervals of 21 days (WG1, WG2, WG3, WG4 and WG5). The design adopted was randomized blocks, with four treatments and five animals per treatment, totaling 20 experimental plots. All data were submitted to analysis of variance and were considered significant at the 5% probability, and then compared by the Tukey test. All statistical analyses were performed using the SISVAR 5.6 software. The results showed significant differences ($P < 0.05$) between all measures of weight gain and the treatments tested. In the first weighing, WT100 presented the highest average weight gain ($1.336 \text{ kg day}^{-1}$), followed by WT67, WT33 and WT0. In the second weighing, WT100 also had the greatest average weight gain ($1.223 \text{ kg day}^{-1}$), followed by WT33, WT0 and WT67. In the third weighing WT0 presented the highest average weight gain ($1.109 \text{ kg day}^{-1}$), followed by WT100, WT33 and WT67. In the fourth weighing, WT33 presented the highest average weight gain ($1.211 \text{ kg day}^{-1}$), followed by WT100, WT0 and WT67. In the last weighing, WT33 presented the highest average weight gain ($1.087 \text{ kg day}^{-1}$), followed by WT0, WT100 and WT67. It is important to note that at the end of the experiment, the quality of the silage was impaired due to poor storage and excess moisture. The positive results of the treatment containing exclusively wheat silage (WT100) in the first weighing and its good classifications in the subsequent weighings suggest that the addition of wheat silage in animal feed can be efficient for weight gain, as long as the adequate quality of the feed offered is maintained. To become a good alternative for animal production, future studies of the economic aspects of this silage should be carried out.

Keywords

Animal production, calves, corn silage

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