

CONSTRUINDO SABERES, FORMANDO PESSOAS E TRANSFORMANDO A PRODUÇÃO ANIMAL

VOLUNTARY INTAKE AND APPARENT DIGESTIBILITY OF BRS 3042 CORN HYBRID SILAGE AT FOUR MATURATION STAGES

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The corn maturation stage influences the content of dry matter (DM), proportion of plant constituents, silage's fermentation process and bromatological composition, consequently, the silage's voluntary intake and apparent digestibility. Were evaluated voluntary intake and apparent digestibility of the BRS 3043 corn hybrid silage harvested at maturation stages with grains without milk line, $\frac{1}{4}$ of the milk line, $\frac{3}{4}$ of the milk line and full grain (26.18, 27.25, 36.6 and 44.45% of DM respectively). Eight sheep distributed in two simultaneous 4 x 4 Latin squares housed in individual metabolic cages were used. The experimental periods consisted of 14 days of adaptation and seven days of sample collect (silage, leftovers and feces). The silages content of DM, mineral matter (MM), organic matter (OM), crude protein (CP), ethereal extract (EE), neutral detergent insoluble fiber (NDF), neutral detergent insoluble corrected for ash and protein (NDFap), insoluble fiber in acid detergent (ADF), lignin, insoluble protein in neutral detergent (IPND), insoluble protein in acid detergent (IPAD), non-fibrous carbohydrates (NFC). The weight of the silages and leftovers and the bromatological composition were used to calculate the dry matter intake (DMI) and nutrients intake. The voluntary intake and feces production data were used to calculate the digestibility. Orthogonal polynomials were used to determine if the maturation stage resulted in a linear or quadratic effect on the measured parameters. Differences were considered significant when $P < 0.05$. Pearson correlations between the variables were made when needed. There was a quadratic effect on DMI, dry matter intake digestible (DMID) e organic matter intake (OMI), with reduction of 20.32, 26.73 and 19.90%, respectively, until the $\frac{3}{4}$ of the milk line maturation stage, and increase of 8.8, 7.52 and 9.0% in the full grain. There was a quadratic effect on CP, NDF and ADF intake and digestibility. The CP, NDF and ADF intake reduced 19.36, 28.23 and 33.49%, respectively, until the $\frac{3}{4}$ of the milk line maturation stage and increased 9.11, 8.35 and 8.20% in the full grain. The NFC intake were not altered at maturation stage. The CP, NDF and ADF digestibility reduced 17.25, 20.07 and 21.69%, respectively, until the $\frac{3}{4}$ of the milk line maturation stage. The advancement of maturation stage reduced the nutritional value of BRS 3042 corn hybrid silage.

Keywords: corn silage, forage, nutritional value

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