

## Nutritional value of corn silage of different hybrids harvested at 133 days after emergence plants

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**Introduction** Corn silage is consecrated as a food of high importance in ruminant feed. Currently there is a wide range of different corn hybrids for this purpose, and these materials is sought covering a high productivity per unit area, and also that they confer a high quality of food produced. Thus the agronomic characterization of genetic material available in the market is essential so that you achieve a high nutritional value of silage (ROSA et. al 2004). There is great variability in corn genotypes offered and it becomes an obstacle to the planning of the crop, the research in this area becomes important to evaluate these differences to enable the producer and technical information for the best choice of hybrid be planted. The aim of this study was to evaluate the nutritional value of silage from different corn hybrids evaluated at 133 days after emergence (DAE) plants.

**Materials and Methods** The experiment was conducted at the Department of Animal Production (NUPRAN), Department of Agricultural and Environmental Sciences of the State University Midwest (UNICENTRO) in Guarapuava, PR. Temperate climate of altitude - Cfb. Was determinated the values of neutral detergent fiber (NDF), using  $\alpha$  amylase heat-stable, acid detergent fiber (ADF) and ash, according to Van Soest et al. (1991). The levels of total digestible nutrients (TDN) were obtained via equation [TDN% = 87.84 - (0.70 x ADF)] suggested by Bolsen (1996), and crude protein (CP) by the micro Kjeldahl method. The hybrids used were 6030 YG SG, LG PRO 6036, PRO 6038 LG, BRAS 3010, PL 6880 and PL 1335. Sowing of corn hybrids was conducted in plots with total area of 12 m<sup>2</sup> (2.4 mx 5.0 m) was used to assess the quantitative and qualitative floor area of 6.4 m<sup>2</sup> (1.6 mx 4.0 m). The spacing used was 0.4 m, and a population of 75000 plants per hectare. The plants were harvested, chopped and packed in PVC silos, with dimensions of 0.5 m long and 0.1 m diameter, equipped with valve "Bunsen". the silos were open 32 days after silage production, and these samples were dried in a forced air oven at 55 ° C for 72 hours ground in a mill type Wiley, sieve of 1 mm mesh and used for laboratory testing. Data were subjected to analysis of variance comparison of means at 5% significance level, through the SAS (1993).

**Results and discussion** In Table 1 are presented bromatological parameters of silages from different hybrids harvested at 133 days after emergence (DAE), the developmental hard dough stage, with a mean value of plant dry matter of 32.84%. The hybrids evaluated differed significantly only for the percentage of NDF content being this higher for the hybrid LG 6036 and 3010 BRAS, intermediate for hybrid PL 1335, and lower in hybrid LG 6038 PRO, SG 6030YG and PL 6880. According to Gomes et al. (2004) values of NDF below provide a higher digestibility of silage in question, which can positively influence the performance of the animals fed the same. In the remaining parameters silages showed no variation, Alvarez

et. al. (2006) evaluating different hybrids also found no differences in CP, whereas for NDF levels there was variation in the different hybrids, and argues that this feature in particular is directly related to the particle passage rate through the digestive tract, and the lower the level of NDF the higher the dry matter intake, this being a very important characteristic for the assessment of different hybrids.

**Table 1** Nutritional value of corn silage harvested at different hybrid DAE 133 plant.

Constituents, %DM	LG 6038 PRO	LG 6036 PRO	SG 6030 YG	BRAS 3010	PL 6880	PL 1335	Mean
Ash	1.83 <sup>a</sup>	1.86 <sup>a</sup>	2.06 <sup>a</sup>	1.74 <sup>a</sup>	1.62 <sup>a</sup>	1.56 <sup>a</sup>	1.78
CP	6.33 <sup>a</sup>	6.28 <sup>a</sup>	5.77 <sup>a</sup>	6.30 <sup>a</sup>	5.98 <sup>a</sup>	5.54 <sup>a</sup>	6.03
NDF	54.92 <sup>b</sup>	59.40 <sup>a</sup>	54.13 <sup>b</sup>	58.98 <sup>a</sup>	54.04 <sup>b</sup>	56.26 <sup>ab</sup>	54.92
ADF	28.86 <sup>a</sup>	28.49 <sup>a</sup>	31.78 <sup>a</sup>	28.58 <sup>a</sup>	29.01 <sup>a</sup>	28.32 <sup>a</sup>	28.86
TDN	67.64 <sup>a</sup>	67.89 <sup>a</sup>	65.60 <sup>a</sup>	67.84 <sup>a</sup>	67.53 <sup>a</sup>	68.01 <sup>a</sup>	67.42

<sup>a,b</sup>Means within a row with different superscripts differ by Tukey test at 5%.

**Conclusions** The hybrid LG 6038 PRO, SG 6030YG and PL 6880, stood out from the others by presenting lower value of NDF, which may confer a higher digestibility of silage made with these materials.

## References

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