

QUALITY AND FEEDING VALUE OF MAIZE SILAGE PRODUCED IN LITHUANIA

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Summary. The objective of the present work was to test, systemize and summarize the data of nutritive value and fermentation quality of maize silage produced during 2004-2006 and to estimate the effects of factors on winter forage quality and energy value. The analysis of quality of silage was performed on 595 maize samples which showed variable results. The differences between the lowest and highest value for metabolisable energy were 2.62 MJ/kg DM, for crude protein (CP) 93.6 g/kg DM, fibre (NDF) 362.1 g/kg DM, starch 341.1 g/kg DM, pH 3,8. The relationship with factors that can affect quality was estimated. According to the average values of different quality indicators maize silage quality increased annually: this was particularly markedly reflected regarding starch content (from 20.2 % DM in 2004 to 31.4 % DM in 2006), as well as in declining contents of various forms of fibre and indigestible organic matter. Production date affected maize silage quality: under Lithuania's climate conditions the most suitable time for maize ensiling is the period from beginning of October and later on, if the meteorological conditions are favourable. Maize silage produced on these days was characterised by the highest quality according to several parameters. Silage-making technology (bunker or clamp) has only a slight effect on maize silage quality. The differences in main maize silage quality parameters were low due to the length of the storage period. Prolonged maize silage storage time showed increased relative number of the samples with signs of poor fermentation (increased pH value and low fermentation rate).

Key words: maize silage, quality, energy value, ensiling date, silage-making technology.