THE QUALITY OF INDICES OF GREEN MASS AND HAY FROM *ARRHENATHERUM ELATIUS* AND *FESTUCA ARUNDINACEA*, IN MOLDOVA

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Abstract

We studied the quality indices of the of green mass and hay from tall oatgrass *Arrhenatherum elatius* and tall fescue *Festuca arundinacea* which grow in the experimental sector of the "Alexandru Ciubotaru" National Botanical Garden (Institute) MSU. It was determined that the biochemical composition and nutritive value of the dry matter of the harvested plants were: 9.6-11.2% CP, 8.2-8.7% ash, 35.4-37.5% CF, 37.9-39.9% ADF, 65.3-68.4% NDF, 3.3-3.7 % ADL, 12.0-12.4% TSS, 34.6-36.2% Cel, 27.4-28.5% HC, 590-629 g/kg DMD, 538-572g/kg OMD, 11.48-11.76 MJ/kg DE, 9.43-9.66 MJ/kg ME and 5.45-5.67 MJ/kg NEl. The quality indices of the prepared hays were: 10.0-11.4% CP, 9.4-10.0% ash, 36.7-39.9% CF, 39.4-41.4% ADF, 64.6-68.3% NDF, 3.7-3.8 % ADL, 3.7-3.8% TSS, 35.7-38.0% Cel, 25.2-26.5% HC, 515-567 g/kg DMD, 471-527g/kg OMD, 11.21-11.55 MJ/kg DE, 9.20-9.48 MJ/kg ME and 5.3-5.5.50 MJ/kg NEl. The biochemical methane potential of the studied substrates varied from 343 to 354 l/kg ODM. The *Arrhenatherum elatius* and *Festuca arundinacea* species can be used to restore permanent grasslands or to create temporary grasslands, and the harvested green mass and prepared hays can be used as forages for farm animals or as substrates for biomethane production.

Key words: *Arrhenatherum elatius, biochemical composition, biomethane potential, Festuca arundinacea, nutritive value*