

THE QUALITY OF GREEN MASS AND HAY FROM ROMANIAN CULTIVARS OF *FESTUCA ARUNDINACEA*, *FESTUCA PRATENSIS* AND *FESTUCA RUBRA* IN THE REPUBLIC OF MOLDOVA

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The species of the genus *Festuca* L., Poaceae family are common in the floristic composition of permanent and temporary grasslands. In the Official Catalog of the varieties of crop plants in Romania are registered 16 fescue cultivars, but in the Republic of Moldova there are no registered fescue cultivars.

The aim of this study was to evaluate the quality of harvested green mass and prepared hay from Romanian cultivars of of *Festuca* species created in Research-Development Institute for Grassland Brasov: 'Brio' and 'Măgurele' of tall fescue *Festuca arundinacea*, 'Tâmpa' and 'Transilvan' of meadow fescue *Festuca pratensis*, 'Căprioara' and 'Peisaj' of red fescue *Festuca rubra*, grown in monoculture an experimental field of the NBGI, Chișinău, Moldova. The quality of the green mass and hay have been determined by near infrared spectroscopy technique, using the PERTEN DA 7200 at the R&D Institute for Grasslands, Brașov, Romania. The nutritional value and energy supply of the feed and the biochemical methane potential of substrates were calculated according to standard procedures.

It was determined that the dry matter nutrient content of the harvested mass varied among the species and cultivars: 71-119 g/kg CP, 359-400 g/kg CF, 73-98 g/kg ash, 388-413g/kg ADF, 666-695 g/kg NDF, 30-45 g/kg ADL, 77-174 g/kg TSS, 355- 368 g/kg Cel, 272-307 g/kg HC with nutritive and energy values 56.3-58.9% DDM, 11.28-11.64 MJ/kg DE, 9.26-9.9.56 MJ/kg ME and 5.29-5.57 MJ/kg NEI. The hay prepared from *Festuca* species contained 61-95 g/kg CP, 364-459 g/kg CF, 74-94 g/kg ash, 391-479 g/kg ADF, 681-790 g/kg NDF, 32-56 g/kg ADL, 359- 428 g/kg Cel, 290-318 g/kg HC, 8-153 g/kg TSS with 51.6-58.4% DDM, 8.45-9.51 MJ/kg ME and 4.47-5.54 MJ/kg NEI. The estimated biochemical methane potential of the studied fescue green substrates varied from 328 to355 l/kg VS.

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