THE PYTOMASS QUALITY OF CHICKPEA, *CICER ARIETINUM* L., UNDER THE CONDITIONS OF MOLDOVA

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Abstract

We investigated the quality indices of the phytomass from chickpea, *Cicer arietinum*, the local cultivar *'Ichel'*, grown in monoculture in an experimental field of the National Botanical Garden (Institute), Chișinău, Republic of Moldova It was determined that the nutrient content of the dry matter of chickpea whole plants cut in the flowering - early pod stage included: 19.31% CP, 4.23% EE, 22.62% CF, 43.57% NFE, 10.26 % ash, 1.45% Ca, 0.32% P with 18.46 MJ/kg GE, 9.83 MJ/kg ME, 5.74 MJ/kg NEl. The fermentation quality and nutritive value of silage and haylage prepared from chickpea plants were characterized by the following indices: pH= 4.40-4.47, 27.6-34.5 g/kg lactic acid, 2.5-2.8 g/kg acetic acid, 0.3-0.4 g/kg butyric acid, 19.64-20.61% CP, 25.67-6.15% EE, 24.57-25.32 % CF, 36.77-39.20% NFE 10.92-11.15 % ash, 1.39-1.41% Ca, 0.35-0.39 % P, 18.75-18.90 MJ/kg GE, 9.81-9.81 MJ/kg ME, 5.47-5.55 MJ/kg NEl. The nutrient content and energy value of the prepared hay was: 19.77% CP, 2.64% EE, 27.01% CF, 39.21% NFE, 11.37% ash, 1.46% Ca, 0.31% P, 18.07 MJ/kg GE, 8.81 MJ/kg ME, 4.98 MJ/kg NEl. It has been determined that the studied fresh and ensiled substrates have C/N=15-16 and the biochemical methane potential reaches 312-322 l/kg ODM. The local chickpea cultivar *'Ichel'* can be used as an alternative forage source for farm animals or as co-substrate in biogas generators for renewable energy production.

Key words: biochemical composition, biomethane potential, *Cicer arietinum*, green mass, hay, haylage, nutritive value, silage