

SOME AGROBIOLOGICAL PECULIARITIES AND THE ECONOMICAL VALUE OF CHIA *SALVIA HISPANICA* L. IN MOLDOVA

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Abstract

The aim of this study was to evaluate some agrobiological peculiarities, the quality of the harvested fresh mass and prepared haylage of the genotypes of chia – *Salvia hispanica*, cultivated under the conditions of the Republic of Moldova. The studied genotypes of chia were characterized by optimal growth and development rates. It was determined that the nutrients of the dry matter of *Salvia hispanica* whole plants cut in the flowering period were: 87-107 g/kg CP, 77-83 g/kg ash, 347-377g/kg CF, 348-362 g/kg ADF, 517-533 g/kg NDF, 62-65g/kg ADL, 283-331 g/kg Cel, 166-174g/kg HC, 107-123 g/kg TSS, with nutritive value: 60.70-61.79% DMD, RFV= 106-111, 12.00-12.19 MJ/kg DE, 9.85-10.1 MJ/kg ME, 5.87-6.03 MJ/kg NEL. The fermentation quality and the nutritive value of the haylage prepared from chia plants were characterized by the following indices: pH= 4.81, 18.5 g/kg lactic acid, 2.3 g/kg acetic acid, 0.3 g/kg butyric acid, 100 g/kg CP, 80g/kg ash, 400 g/kg CF, 419 g/kg ADF, 593 g/kg NDF, 72 g/kg ADL, 347 g/kg Cel, 199 g/kg HC, with nutritive value: 56.3% DMD, RFV= 88, 11.21 MJ/kg DE, 9.20 MJ/kg ME, 5.22MJ/kg NEL. The studied fresh and ensiled substrates from *Salvia hispanica* have C/N=29.2-36.8 and the biochemical methane potential reaches 285-298 l/kg ODM. Chia – *Salvia hispanica* – can serve as multi-purpose crops for forage production and feedstock for renewable energy production.

Key words: agrobiological peculiarities, biochemical composition, biomethane potential, green mass, haylage, nutritive value, *Salvia hispanica*