

## THE BIOMASS QUALITY OF *CRAMBE CORDIFOLIA*, AND ITS POTENTIAL APPLICATION

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The objective of this research was to evaluate the biomass quality of introduced species *Crambe cordifolia* Steven, *Brassicaceae* family native to the Caucasus.

The *Crambe cordifolia* plant was collected the third year of vegetation in flowering stage, from experimental field of the NBGI, Chisinau, Moldova. The quality of the green mass has 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. The theoretical ethanol potential was calculated based of cellulose and hemicellulose content in dry stems after harvesting the seeds and its conversion of hexose and pentose sugars.

Results revealed that dry matter of whole plant contained 161 g/kg CP, 304 g/kg CF, 100g/kg ash, 330g/kg ADF, 504 g/kg NDF, 54 g/kg ADL, 97 g/kg TSS, 276g/kg Cel, 174 g/kg HC with nutritive and energy value 63.2% DDM, RFV=117, 10.21 MJ/kg ME and 6.23 MJ/kg NEI.

We found that the fresh mass substrates for anaerobic digestion had C/N=20 and biochemical methane potential achieved 326 L/kg VS.

The collected dry stems contained 444g/kg cellulose, 233 g/kg hemicellulose and the theoretical ethanol potential from fermentable sugars averaged 492 L/t.

The *Crambe cordifolia* green mass can be used as alternative fodder for farm animals or as substrates for the production methane in biogas generators, the dry stems as feedstock for obtained bio ethanol for production renewable energy.

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