THE BIOMASS QUALITY OF *EPILOBIUM ANGUSTIFOLIUM* L. AND PROSPECTS OF ITS USE IN MOLDOVA

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Abstract

This research was aimed at evaluating the quality indices of green mass forage and the substrates for the biomethane production from rosebay willowherb – Epilobium angustifolium. The local ecotypes of Epilobium angustifolium which grow in the experimental sector of the "Alexandru Ciubotaru" National Botanical Garden (Institute) MSU Chișinău served as subject of the research. The results revealed that the dry matter of Epilobium angustifolium whole plants contained: 12.99% crude protein, 5.83% crude fats, 28.33% crude cellulose, 44.92% nitrogen free extract, 5.23% sugars, 1.74% starch, 7.92 % ash, 1.11% calcium, 0.28% phosphorus with 10.06 MJ/kg ME and 5.64 MJ/kg NEl. The Epilobium angustifolium substrate for anaerobic digestion and biomethane production had optimal carbon to nitrogen ratio and the estimated biochemical methane potential reached 288 l/kg VS. Epilobium angustifolium can be used as an alternative source of nutrients in livestock nutrition, or as a source of biomass for biomethane production in renewable energy production and as organic fertilizer.

Key words: biochemical composition, biomethane potential, Epilobium angustifolium, green mass, nutritive value