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## **Biochemical methane potential of feedstock from nature conservation management**

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Semi-natural grasslands are characterized by high biodiversity and can be maintained only with continuous management. In current situation, without sufficient demand for this biomass as cattle fodder, this unused renewable resource can be used for biomethane production. In the current paper we estimate the biomass yield and ratio and methane yield by four functional groups in three Estonian semi-natural grassland types. Hence, the largest amount of other herbs was found from alluvial meadows, even if the proportion of this functional group was dominant in wooded meadows. The contribution of the sedges & rushes was the largest in alluvial meadows. The grasses were prevalent in mesic meadows. The legumes were growing in all studied grassland types in small amounts. The methane production in the end of the experiment was higher in hay than in silage. At the beginning of the BMP experiment for hay and silage the average methane production in dicotyledonous plant species was higher than in monocotyledonous plant species. In the end of the BMP experiment, it was vice versa. Improved knowledge about the functional groups and their biochemical methane potential enables to promote and optimize alternative usage of this late harvested biomass from semi-natural grasslands for bioenergy production.

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