

Conclusion and future prospects

The production of 295 ml methane is a decent yield, similar to other grasses and plants previously tested for methane potential. Pasture crops have a similar yield and are already used in large scale reactors. This type of substrates can be used in co-digestion with other substrates such as manure in farm scale reactors. However, mechanical problems can arise in the reactors dealing with grasses and plants. Therefore some kind of milling is necessary. This thesis confirms that milling also raises the production. Alkaline pretreatment raises the production but the chemicals are costly. Fungal pretreatment did not work for this kind of species. It is possible that is suitably to apply to hardwood species that are more resistant by nature. Now economical assessment must be made considering both the harvest of the plants as well as the cost for the pretreatments. This can in turn tell if it is worth producing biogas from wetland plants and which pretreatments to use.



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Evaluation of wetland plants as a source for biogas production after mechanical, alkaline and fungal pretreatments.



The biogas production from two species of wetland plants was determined by batch wise digestion in 300-mL bottles. In Addition, three different pretreatments were evaluated for enhanced biogas production: Milling, alkaline and fungal pretreatment. The methane potentials can be used in comparisons between substrates and pretreatments. The potentials are also important when economically evaluating the use of wetland biomass for biogas production.