

Evaluation and cultivational optimisation of various origins of sainfoin for the production of biomass, and the investigation of the influence of the tannins on foaming in biogas plants

Project management: Prof. Dr.-Ing. Thorsten Ahrens

Summary: The aim of the project is to return sainfoin to the focus of agricultural use. The expansion of biodiversity through the inclusion of the sainfoin in crop rotation, is a focal point. The two options are to be considered in this respect: sainfoin as a catch crop and the enhancement of marginal grassland sites through grass- sainfoin mixed cultivation. In addition to pure biomass production, it is expected that sainfoin will have a positive impact with regard to its use in biogas plants. By comparison with values from literature, the possibility of partial substitution of maize in biogas systems is to be explored; economic aspects have special significance in this respect, against a background of barren soil and climatic conditions. These economic considerations should contain a targeted assessment of the potential value chain, starting from the provision of the raw material, through to biogas production. Sainfoin represents a promising co-substrate for biogas plants. The reduction of foam formation in biogas plants is a significant part of the scope of this project. The potential influence of tannins contained in the material will be evaluated, under consideration of the technical and economic aspects. In addition, the starting material for the future development of varieties will be provided following the evaluation of different origins.

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