

New Sources of Biomass: CORNET's « SaliChem » Project

PFI Biotechnology and the Celabor Research Institute (Centre de Recherche et de Contrôle agro-alimentaire, emballage, environnement, papetier et textile) based in the Walloon Region of Belgium will jointly embark on a new CORNET Project at the start of 2015: The project bears the name « Saline Plant Uses for Chemicals and Energy Production – SaliChem ». The principal focus will be on forms of biomass which do not compete with food production and can be cultivated on land on which conventional crops no longer grow owing to elevated salt concentrations. The goal is to attain maximum possible material utilisation of such so-called halophytes (salt-tolerant plants) in the PFI biorefinery concept and to use the residual biomass as a source of energy.

Owing to the progressive salinisation of soils caused by climate change, mismanagement of active irrigation of agricultural land, and deforestation, less land is available for cultivation of traditional crops – particularly in sunny countries such as Spain. In order to meet future demand for biomass as required by the European and national bio-economic strategies for the provision of foodstuffs, chemicals, and energy, agricultural use should also be made of salinated soils. A solution is provided here by salt-tolerant plants (halophytes), which can simultaneously supply biomass for material and energetic utilisation, produce plant extracts for the pharmaceutical and food industries, and also have a soil-remediating action.



The possibilities of cultivating selected halophytes in Europe will be investigated in the SaliChem Project. At the same time the plants will also be tested for the accumulation of biologically active secondary plant substances¹ and these substances extracted. The biogas potential of the biomasses prior to and after extraction will also be examined. If the halophytes contain cellulose then utilisation by biochemical conversion into ethanol will be considered. A sustainable halophyte utilisation plan will then be drawn up on the basis of the results obtained.

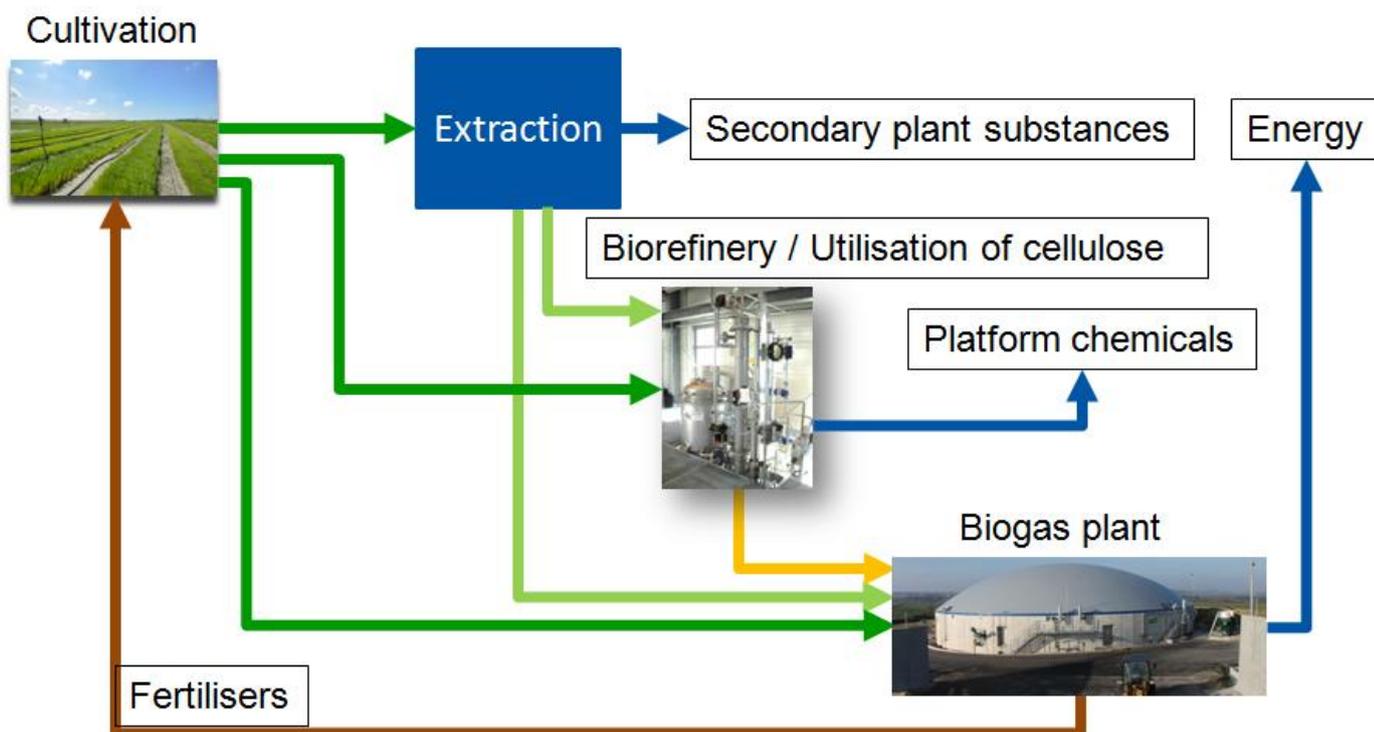
The goal of the project is to set up new cultivation schemes for halophytes with innovative utilisation concepts from which farmers, suppliers to the pharmaceutical and food industries, and operators of biogas plants and biorefineries can all benefit. In addition, halophyte utilisation can help to reduce bottlenecks in the supply of biomass.

Thanks to its wealth of expertise in biomass utilisation and plant substance extraction, the project consortium, consisting of PFI as coordinator of the overall project and Celabor, is ideally qualified to undertake the project.

¹ Secondary plant substances are chemical compounds produced by plants, such as carotenoids, polyphenols, or phenols. They are produced neither in energy metabolism nor by anabolic or catabolic pathways. Instead, they are formed in special types of cells. Unlike primary plant substances they are not essential for plant growth and survival, but are of considerable interest for the food and pharmaceutical industries.

The official project website www.SaliChem.eu will go live in early 2015.

The SaliChem project is funded as Project No. CORNET SaliChem: 136 E by the German Federal Ministry of Economics and Energy through the [German Federation of Industrial Research Associations \(AiF\)](#) within the IGF programme for promoting industrial cooperative research and development in accord with a resolution passed by the German Federal Parliament. We would like to take this opportunity to express our thanks for this funding.



Possible uses of biomass depending upon chemical composition – Biorefinery concept

Further Information:

Dr. Michael Müller

EU Project Manager Biotechnology

Tel.: +49 6331 2490 850, E-Mail: michael.mueller@pfi-biotechnology.de

Project logo:



Logo of project partner:



Programme logo:



Logo of the German funding agency:



Logo of the Walloon Region:

