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PROGRASS – Prototype Plant starts Production

The installation of the PROGRASS prototype plant in the German partner region Vogelsberg is now completed. First test runs are very encouraging. The plant produces solid fuel as well as biogas. The input is biomass from NATURA 2000 grasslands, silage that had been harvested during the summer 2009. In July 2010 the mobile plant will be transferred to the Estonian partner region and in October to the Welsh one. In each region, on-site information events for farmers and other stakeholders as well as for the interested public are scheduled.



The particularity of the PROGRASS plant is the partitioning of the used silage into a liquid and a solid part. For this purpose the silage is first mashed with 40 °C warm water and then pressed. Afterwards the liquid part is employed in the biogas production and the solid press cake is dried using waste heat from biogas combustion.

The decisive advantage of the PROGRASS procedure, in relation to the usual biogas plants, is its capability to work with mature grasses containing high parts of minerals and lignin. Therefore, an extensive use of species-rich grasslands underlying nature protection like i.e. NATURA 2000 is made possible. This opens opportunities for a profitable management of these, otherwise in their existence threatened, areas.

Second Transnational Meeting and Inauguration Event in Vogelsberg in March 2010 in Germany

In attendance of state, regional and local politicians, environment experts as well as the interested public the PROGRASS prototype plant was officially inaugurated in the Vogelsberg partner region (Germany) on March 9th, 2010. At the same time the second partner meeting took place, thus all project partners and their guests had the chance to visit the running prototype plant on-site.

Apart from the inauguration of the plant the transnational partnership dedicated time to reporting on the harvesting season 2009 with its outputs and local specificities in each partner region and to plan further steps, among which the scheduling of the plant circuit in the project regions.



In the last year, all project partners selected two kinds of areas: demonstration areas to produce the silage input for the PROGRASS plant and experimental areas for scientific purposes. For the harvest of the demonstration plots big scale machinery could be used whereas for experimental purposes small scale machines had to be adapted and partially

reconstructed. Especially the Welsh and German partners had to struggle with bad weather conditions influencing the silage quality.

First Test Pellets Produced

The solid output (besides biogas and heat) of the PROGRASS plant consists of dried silage grass (max. 15 % liquid contingent). This press cake has to be further processed to pellets or briquettes. Actually the first briquettes were just produced for test purposes in the Vogelsberg partner region (Germany). The aim is to get a marketable product which can potentially be used in standard combustion furnaces.



For this reason the project partner Mawera-Viessmann will start combustion tests in July. The purpose is to optimise the combustion characteristics and the resulting exhaust emissions as well as the ash residues.

An important factor influencing the quality of the grass pellets or briquettes is the composition of the silage. Therefore during the harvesting season 2009 the University of Bonn (Germany) did a series of silage trials testing different types of additives for the silage biomass. For this purpose specific mini-silos were constructed. They still pursue the analysis. Further trials are scheduled for the following harvesting season.

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- Estonian University of Life Sciences, Tartu, Estonia
- Rheinische Friedrich-Wilhelms-Universität, Institute of Animal Science, Bonn, Germany
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