

**AGROBIOGAS: An integrated approach for biogas production with agricultural waste**

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Annually around 700 million tons of agricultural wastes are produced within the EU putting a burden on farmers responsible for its management. At present, the majority of manure and crop residues have been treated using the most inexpensive methods, even though they are not usually the most appropriate or effective. Upgrading to a biogas process by means of anaerobic digestion (AD) represents an alternative, but reliable treatment with a high potential in terms of energy and nutrient recovery, as well as minimisation of environmental pollution.

There are still many challenges to be overcome in order to make AD technology effective for treatment of agricultural waste and widely accessible to European farmers. Its distribution is still scattered throughout the EU and farmers, depending on their location, have different opportunities to apply this technology. It is necessary to clarify which are the best conditions, adapted to local situations to treat the targeted residues and make this information accessible to farmers through the Industrial Association Groupings (IAGs) that represent them. Co-digestion presents a potential way for farmers to treat their own waste together with other organic substrates. Hence, farmers will be able to treat their own residues effectively and, at the same time, enable economic profitability by treating and managing organic waste from other sources (waste disposal and management fees) and by selling and/or using its outputs (e.g. heat and electrical power, stabilised bio-fertilisers).

The aim of the proposing IAGs is to gather and gain knowledge about financial, legal and technical requirements to develop feasible agricultural AD treatments for different local conditions to further transfer it to their Small and Medium Enterprise members. This will strengthen the competitiveness of AD treatment of agriculture waste with other treatments and will ensure the compliance with the European and national environmental legislation.

The EC 6<sup>th</sup> Framework Programme Collective Research project **Agrobiogas** is comprised of 24 partners (Research and Technical Development, RTD as well as IAGs and SMEs) from across Europe. In order to enhance the actual European development of decentralised anaerobic digestion the **Agrobiogas** project has five core objectives:

- To increase the efficiency of AD with agricultural waste in co-digestion with other organic residues;
- To gather the scattered information about biogas local projects and make it accessible to farmers and farmers associations, ensuring a successful performance of current and future AD plants;
- To reduce the uncontrolled disposal of AD sludge by the development of recommendations for the use of it as bio-fertiliser;
- To train the IAGs in utilisation of a European Agricultural Helpdesk components, a co-fermentation substrate database and in applying the bio-fertiliser recommendations. In a second step the IAGs will introduce the Helpdesk network, its components and the benefits to their member SMEs;
- To disseminate the generated knowledge by training and information campaigns.

Tangible outputs from the project will be the Helpdesk together with an AD simulation toolkit based on lab-based experimental work on co-fermentation, an investment decision tool and European operational guidelines.

The project commenced 1<sup>st</sup> June, 2006, will run for 36 months and comprises seven workpackages, of which WP 1 (**Updating the state of the art of agricultural AD in Europe**) is now complete. The project website can be found at <http://www.agrobiogas.eu>.

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