

Facilitating the development of energy independent farming in Livestock

Main results / outcomes

Making Methane from ruminant animals become an energy asset.

Available solutions to capture methane from manure for small & medium livestock farms will support many farmers into producing and consuming their own energy on site and run agricultural machines and transport vehicles on biomethane produced from livestock manure. This would consequently lead to establish carbon negative farms and would significantly reduce the use of chemical fertilizers. Digested material is an excellent natural fertilizer to restore organic matter in the soil. Even small and medium farmers will lower and stabilize their operational costs. Livestock farms reducing chemical fertilizer and producing energy for surrounding communities will be more accepted by the population.

Practical recommendations

The challenge is to make most of the livestock farmers capture the fugitive methane and transform it into energy on site, cutting most logistics costs for material purchased and external energy consumption. Therefore, such solutions should be promoted through farmers associations and advisory services. Policy makers should enable farmers, through subsidy programs, to invest in biomethane capture solutions, and biomethane usage for machinery and energy production. Demonstration activities, knowledge sharing and peer to peer learning are necessary to facilitate the quick adoption of innovative biomethane equipment.



Figure 1. Methane capturing system on 100 dairy cow farm powering a New Holland T6 180 methane tractor (copyrights New Holland).

Further information

GHG emissions from burning fossil fuel in agricultural machinery during the normal course of operation is around 10% of the GHG emissions of agriculture in comparison, or ca. 1% of total EU-27 GHG emissions (https://di.unfccc.int/detailed_data_by_party).

About this abstract

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AgroFossilFree is a H2020 multi-actor project that will evaluate the current status in EU agriculture regarding energy use and assess existing needs, allowing farmers to optimize agricultural production through more efficient energy use and reduced GHG emissions, resulting in economic, agronomic and environmental benefits. AgroFossilFree will create a framework under which critical stakeholders will cooperate to evaluate and promote the currently available Fossil-Energy-Free Technologies and Strategies (FEFTS) in EU agriculture. The project is running from October 2020 to September 2023.

Website: www.agrofossilfree.eu



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