Research Summary Sheet

Tools for sound use of digestate as fertilizer of arable crops

(NIR measuring system)

Context and Challenges

The aim of WP3 is to provide in depth knowledge on the improving of both conventional anaerobic digestion process and advanced anaerobic digestion technologies. Anaerobic digestion (AD) technology offers a consolidated way to convert many agro-wastes into biogas and digestate, a renewable fertilizer.

Results and Applications

Nutrients in digestate can be recycled back to the fields for crops growth in order to have a renewable fertilizer.

A smart way of digestate use was defined in the project: a near-infra-red system allowed for the proper management of nutrients loads on fields. The NIR measuring system can be used for analysing the nutrients in digestate produced from manure and agro-waste both in storage systems and on mobile machines.

To connect NIR values with nutrients management, a farm management software will be used to adapt artificial fertilizer application and digestate distribution.

Breakthroughs, benefits and added value

It was therefore possible to minimize the effect and risk of environmental impact of nutrients extra loading.

Further information on NoAW project: http://noaw2020.eu

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