

Substituting mineral inputs with organic inputs in organic viticulture

A two-year demonstration was carried out in an organic farm combining field crops and a vineyard.

The aim was to decide whether the oil-cake obtained from extracting rapeseed, hemp, sunflower and camelina oil should be used as livestock feed for a neighbouring farm, as was usually done, or as a fertiliser or soil-enhancer with biostimulating effect for the vineyard. During the first year, the fertilising efficiency of the oil-cake was compared to a commercial organic compost and a mix of both. During the second year, the oil-cake was compared to a control plot.

Although the obtained results were mixed, the main recommendation would be to consider the oil-cake as an as effective fertiliser as the commercial compost.



National Task Forces

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Nutri2Cycle

Transition towards a more carbon and nutrient efficient agriculture in Europe

PROUD MEMBER

of the



This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 773682.

Nutri2Cycle mission & goals

The Nutri2Cycle, EU project is aimed at closing C-N-P loops by reconnecting nutrient & carbon flows between conventional agro-pillars through agro-processing.

The project will:

- Benchmark existing N-P-C flows
- Propose & test innovative technologies at local level
- Validate (prototype lighthouse demo's)
- Elaborate strategic scenario's to identify the effect of these innovations at EU scale

ABOUT THE PROJECT

The Nutri2Cycle will be running from 2018 to 2022.

European agriculture is still characterized by a high overall contribution to greenhouse gas emissions and inefficient recovery of carbon and re-use of major plant nutrients. The project will assess the current Nitrogen, Phosphorus and Carbon flows looking into existing management techniques in different farms across Europe & analysing their related environmental problems.

NATIONAL TASK FORCES

NTFs will be set up in all Nutri2Cycle member states to enable the percolation of project results to local level in local language.



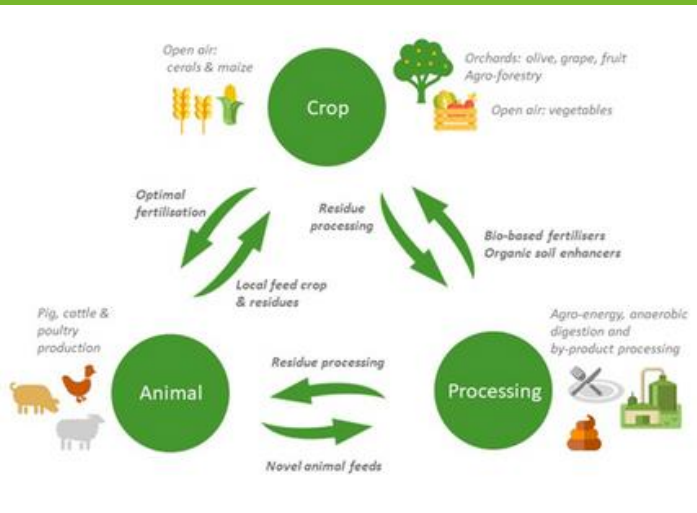
CIRCULAR ECONOMY AND FERTILISATION

As part of this project, the Chamber of Agriculture was commissioned to demonstrate the situation and possible developments in cycling in a farm combining livestock farming, crops and agroforestry.

For this, from 2019 to 2022, we monitored an agroforestry plot on a farm including a breeding workshop and a plant production workshop in the Charente-Maritime department. This is the Manicot farm, combining the breeding of fat geese and their processing. The Manicot farm has been engaged in actions to improve energy autonomy since 2002 and has been developing its agro-forestry program since 2010. The study protocol combined the characterization of the soil, effluents and monitoring of crop development.

Our monitoring highlighted that:

- The effluent deposit can fertilize 4 ha out of 86 ha, or 5% of UAA. Operations therefore remain dependent on a significant external contribution.
- The available nitrogen from manure and slurry was estimated at 17% and 88% of the total intake, respectively. The improvement concerns losses by volatilization.
- The carbon stock is 36 t/ha on average.
- Agro-forestry establishment has a positive agronomic effect and interesting energy production.



NUTRI2CYCLE brings together the extensive expertise of leading experts in the field of nutrient cycling from 19 organisations of 12 EU countries.