

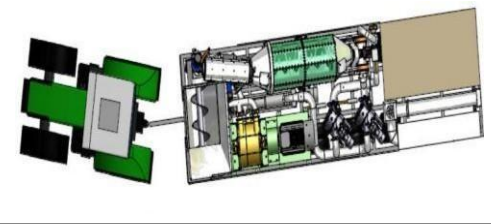
## Technology for N&P recovery as solid digestate starting from manure and slurry combining mobile cavitator and anaerobic digestion



**Keywords:** • anaerobic digestion • manure • nutrient recovery • slurry cavitator

### Key facts:

- **Technology category:** before anaerobic digestion.
- **Input material:** manure and slurry cavitator them.
- **Output products:** homogenised material more suitable for anaerobic digestion and more productive.
- **Capacity:** 60.000 t/year - 25 t/hours.
- **Focusing geographical areas:** ITALY
- **Technology status:** TRL8 -system complete and qualified.  
**EC/MS Authority permits:** -



### Summary of the technology:

In the southern part of the province of Mantua, a management system for managing slurries has been put in place. It starts with the separation of slurries, which is carried out directly on the farm, with the separator already present in the farm or with a separator installed on a mobile vehicle. The material is sent to biogas plants to stabilize the slurries, produce renewable energy and digestate.

In this manure chain a new device, the Mobile Slurry-Manure cavitator, have been developed within the life project. The device makes the materials (manure and slurry) more suitable for the use in biogas plants.

Users can include anaerobic digestion plants or farms that require organic inputs to maintain soil fertility.

The separated solid can also be inserted in the vermicomposting process, which allows to enhance it in the agro-energy supply chain within the biogas digesters in place of the corn shredded. In turn, the outgoing solid digestate can be converted into quality vermicompost, which is in great demand in the fruit and vegetable supply chain, San Lorenzo, creator of this "manure chain", deals with facilitating contact between producers and users, and supports farmers in the technological and bureaucratic aspects.



## Competitive position and advantages:

- Excess nitrogen discharge through real disposals
- Withdrawal of liquid digestate for virtuous use with increase of environmental sustainability (carbon footprint calculation)
- Savings on the purchase of mineral fertilizers
- Traceability of exchanges
- Optimization in the management of company storages
- Replacing the silomais with wastewater and reducing the cost of power supply to the system
- Increasing the environmental sustainability of the energy unit produced (carbon footprint calculation)
- Virtuous use of digestate and purchase reduction mineral fertilizers
- Treat slurry and manure to obtain a material more manageable for biogas plants
- High homogeneity
- High dry matter content (16%)
- High pumpability
- Absence of inert materials

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