



Small-scale decentralized biorefinery demo sites in Romania – ManuREfinery Project

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ManuREfinery aims to implement a decentralized **small-scale intelligent, modular, mobile and sustainable biorefinery**, which will transform animal manure into biofeeds with added value and bioingredients for fertilizers.

<https://ope.unizar.es/en/manurefinery>



Interprod Pig Farm Demo Site #1 for testing the gas valorisation line – Peris, Ilfov County, Romania

- 32,500 sows, boars, piglets, and weaners.
- significant NH_3 emissions, in the range of 30-40 ppmv.
- indoor air concentrations need to be reduced below the best available technique (BAT) threshold of 22.1 ppmv.



Denver Chicken Farm Demo Site #2 for testing the gas valorisation line – Bacu Village, Giurgiu County, Romania

- 38,750 chicken
- produces table eggs for different consumers.
- the systems are controlled by sensors of temperature, light intensity, humidity, negative pressure of air for ventilation and a computer is monitoring daily water and feeding consumption.



ManuREfinery solutions for the two farms: **1 m³ fixed biotrickling filter** for bioconversion of the NH_3 gas into NaNO_3 .