POUL-AR®

Valorising poultry manure

Colsen

water, energy & environment

POUL-AR®

Application

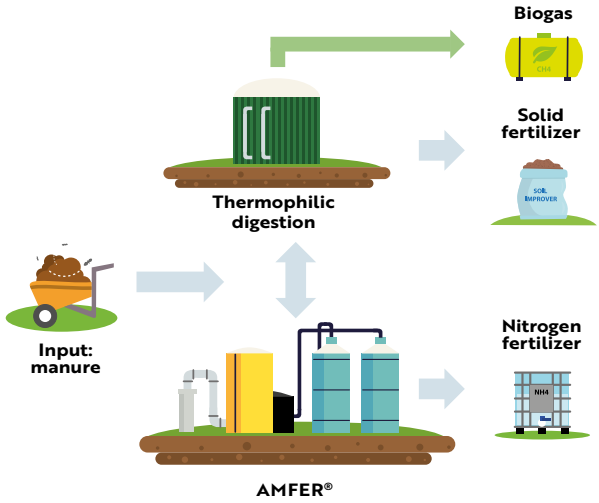
Poultry manure is an energy-rich but largely untapped feedstock for the energy transition. The high nitrogen (N) concentration requires additional treatment to make mono-digestion of chicken manure work.

The Poul-AR® technology is focussing on the mono-digestion of Poultry manure. Inhibitive nitrogen is recovered by Colsen's AMFER® as valuable mineral fertilizer, turning the inhibitor into a secondary revenue stream for the biogas plant. The treated manure is turned into biogas in a (thermophilic) digester. The biogas can be utilized as RNG or used in a CHP. The stabilized digestate can be sold as fertilizer.

With increasing consumption of poultry products, the global volume of chicken manure will only grow for the next decades. With the Poul-AR® technology, Colsen offers a sustainable and profitable solution to handle these excrements.

Process

- Fresh manure is mixed / liquified with liquid digestate
- Nitrogen is removed from the manure using AMFER® technology
- Biogas is produced in a (thermophilic) digester
- Digestate is dewatered, liquid centrate is re-used to the front



Result

A typical Poul-AR® installation has three revenue streams:

- Biogas as RNG or CNG, or Power & Heat
- Solid digestate / soil improver
- Liquid N-fertilizer

References

2012:	Project idea
2013:	Lab scale testing
2016 - 2018:	Pilot scale verification and demonstration world wide
2022:	First commercial size plant in the Netherlands
2024:	Demonstration plant in Japan
2025:	First commercial plant in the United States

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