



## Nutriman Nutrient Management and Nutrient Recovery Thematic Network



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Gesellschaft für Nachhaltige Stoffnutzung mbH



**Technology for N recovery as ammonium sulphate from co-digestion of corn silage, chicken manure and other biowaste by BENAS process**

[https://nutriman.net/farmer-platform/technology/id\\_668](https://nutriman.net/farmer-platform/technology/id_668)



### KEY TECHNOLOGY FACTS

- Recover N from maize silage and poultry manure by anaerobic digestion with a modified stripping process;
- Reach a recovery rate of 80% of ammonia contained in the digestate (approximately 200 t/y);
- Reuse the exhaust heat from the CHP engine and the gypsum from Flue Gas Desulphurisation (FGD) of coal power plants.
- Productivity: ammonium sulphate solution 5-40 t/d, Lime 1.5-14 t/d



TRL 8



### ADVANTAGES & BENEFITS

- Reduction of emissions (ammonia), loads of groundwater (nitrate) and losses of nitrogen from digestate. Reduction of transportation costs and costs for storage of the digestate.
- High potential to increase the yield and to reduce the costs for biogas concepts with nitrogen-rich substrate (e.g. chicken dung).
- Important step for a total treatment to a pure water and for closing fertilizer loops.



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