

EIP-AGRI practice abstract

Short title:

Technology for N&P recovery as ammonia sulphate solution and P-concentrated sludge from digestate, manure and wastewater by TerraOrganic FFT&HEF system

Summary:

TerraOrganic FFT&HEF is an innovative technology system for nutrient separation and recovery from digestate, manure and wastewater. The TerraOrganic FFT is a solid-liquid separation, based on a press screw and a (mechanical) micro filtration. This allows the separation in a solids phase, a thickened sludge, and a liquid phase. The thickened sludge contains up to 50% of the phosphates. The liquid phase, which contains main part of the N fraction, is transported to the TerraOrganic HEF. The TerraOrganic HEF is a humidification/dehumidification system, combined with an Ammonia stripping. It extracts 10 m³ per day of water and recover all the Ammonia and Ammoniac by producing a defined liquid fertilizer as ammonia sulphate solution (ASL). This ammonia sulphate solution can be used directly or be added to the thick sludge to produce an N,P fertilizer worthy of transport. The separation into solid/liquid phases results in a significant reduction in volume and concentration of nutrients. This significantly increases the transportability of the produced recyclates. The technology is available on the market. The capacity is available for 35 to 240 m³/ day, modular. The system can reuse the heat of a biogas plant or similar to meet the operation requirements.

For more information: https://nutriman.net/farmer-platform/technology/id_466