

EIP-AGRI practice abstract

Short title:

Technology for N & P recovery as hygienized fertilizer from liquid manure and digestate with the two-stage Regenis dewatering and drying process

Summary:

REW Regenis offers the "Regenis GE separators" with which the amount of manure in the fattening can be reduced by up to 20% using up to 80% of the bioenergy contained in the slurry as WIN-WIN situation in Biogas production. It is often used after biogas plants in the nutrient circle behind animal production and before crop production on the fields.

The Regenis separator is a pulling screw separator, which performs the water separation and the pressing process separately. The solid is fed to the Regenis GT dryer. The Regenis GT fermentation residue dryer is a fluidized track indirectly heated by flue gases. On the discharge side, the dried fermentation residues are discharged downwards, and the flue gases cooled during indirect heating are discharged upwards into the chimney. The Input capacity for the dewatering process stage is between 1.000 - 4.000 kg/h and for the drying stage between 250 - 1000 kg/h. The dewatering and dryer unit takes 100% of Fermentation residue.

The processes are highly efficient with low energy use and operating cost (about 6 EUR/t). 50% of thermal energy input is recoverable, by heat recovery out of the steam which comes out of the dryer. The technology requires only a hundredth of the exhaust air compared to the belt dryer but achieves a high separation rate of nitrogen and phosphor at 30% - 60%. A sanitation of the products takes place at the same time.

Regenis GT dewatering & dryer unit removes the fermentation residue from the customer and concentrates the nutrients in hygienized solids and liquid fertilizers. Very low operation cost by day and night operation with low energy use. The emissions are also reduced by using compact washer.

For more information: https://nutriman.net/farmer-platform/technology/id_447