

EIP-AGRI practice abstract

Short title:

Technology for N&P recovery as urine and solid soil improver from calves manure with “Geamix” housing system

Summary:

The calves stay on a steel slatted coated floor. The grid has a manure passage of approximately 50%. The manure is then placed on a perforated, urine permeable manure belt that lies under the grid. The manure belt discharges the solid manure several times a day to an air-tight collection outside the house.

The urine falls completely through the perforated manure belt onto a coated sub-floor that is sloped and contains a urine trough at the lowest point. This pure urine then flows away to a closed collection outside the barn. Once a day, the coated sloping subfloor is sprayed with water so that no sediment formation occurs.

The solid manure contains 40 % dry matter due to the direct way of separating. For the thick fraction, a device is being developed that adds quicklime to the manure and further dries the manure with stable air (on a belt dryer) and then crumbles it. This creates an exportable crumb with a dry matter percentage of 85 %. This high-quality fertilizer can be sold both regionally and internationally (because it is hygienic).

This system produces urine as a potential RENURE fertilizer. The urine meets the proposed RENURE criterium $C/N < 3$. The production and usage of RENURE fertilizers allows farmers to process their (excess) livestock manure into a RENURE fertilizer. This means that application will no longer be defined as livestock manure in the Nitrates Directive.

For more information: https://nutriman.net/farmer-platform/technology/id_592