

EIP-AGRI practice abstract

Short title:

Technology for N recovery as urine from pig manure with "VeDoWS" adapted stable constructions system

By adaption of a stable system, pig manure is being primary separated in solid manure and urine in the stable. The main advantage of this primary separation technique is that there are less ammonia, GHG emissions and odour in the stable which is better for the health of the farmer and animals. Another advantage is that this technique implies a better biogas potential for the solid manure, because it is removed on a daily basis and therefore remains fresh. Moreover, the urine is better suitable as a fertilizer because it contains most of the nitrogen and potassium and not phosphorus limited. So with a VeDoWS stable construction the pig-farmer gets a good fertilizer (pig urine) for free.

When calculating total costs, this technology would not be more expensive than a classic stable system (with grid floor) and an end-of-pipe technique (such as an air washer). Price: 80-90 euro per pig place and operational expenditure: maximum 1.50 euros per pig place yearly.

The stable construction more in detail: underneath the slatted floor of the VeDoWS stable system a shallow cellar is constructed which enables the primary separation of urine and solid manure. The cellar consists of two inclining parts with an opening of 18 to 22 mm in its middle. Using a scraper, the solid manure is removed from the manure gutter daily. This primary separation of manure in the cellar is the basis of lower ammonia emissions. There is no need for chemicals by using this technique.

For more information, https://nutriman.net/farmer-platform/technology/id_323