TRAITEMENT DES EFFLUENTS
WASTE TREATMENT

Anaerobic digestion of pig manure

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Anaerobic digestion of pig manure leads to waste stabilisation together with energy production while the fertilizing properties of the methanized effluent are preserved.

A trial on anaerobic digestion of untreated pig manure was made according to a conventional method (completely mixed) using a digestor of 20 m^3. The interest of the procedure was the production of acetic acid due to a prefermentation (micro-aerobiosis). For a 10-day residence time the production of biogas (71-78 p. 100 CH_4) was 237 l per kg dry matter, i.e. 479 l of CH_4 per kg degraded dry matter. The treatment yield was 45 p. 100 COD. Another method based on the up-flow principle was applied. Screened pig manure (630 microns) was used. Using this digestor it was possible to obtain the same amount of biogas four times quicklier. The treatment yield was improved (65 p. 100 COD). The mean production was 493 l biogas/kg degraded COD. It seems to be possible to apply that procedure to most agricultural wastes.

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Animal welfare in intensive husbandry

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One of the main aims of research work in the field of animal welfare is to find objective ways to assess and improve wellbeing in farm animals. Intensive husbandry techniques are threatening welfare because of the pressure exerted by the physical and social environment and the restriction put on the basic species-specific behavioural patterns. Different criteria are available to determine whether such factors are critical. The commercial profit made from animals has little to do with their welfare. The general condition of the animals, i.e. their physical appearance and the absence of any disease or injury, is of great value but its assessment is still a matter of debate. Physiological and behavioural alterations can occur in physically healthy animals and must also be taken into account.