# Effets de la méthanisation sur l'azote des lisiers de porc et conséquences sur son devenir au stockage et à l'épandage

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**Effect of anaerobic digestion on nitrogen in pig slurry : consequences on its behaviour during storage and land spreading**

This study deals with nitrogen behaviour and ammonia emission from experiments carried out on pig slurry management, including anaerobic digestion, storage and land spreading. Total slurry nitrogen is preserved during mesophylic anaerobic digestion, but a proportion of organic nitrogen is converted to ammonium. This conversion vary from 21 % for a conventional slurry to 42% for a fresh slurry. Ammonium nitrogen fraction rises slightly in digested effluent compared to conventional management (from 65% to 72% of Total Kjeldahl Nitrogen). The effect of anaerobic digestion on pig slurry was more visible on pH rising (from 7.2 to 8.2); ammonium nitrogen from digested effluent can be more easily emitted to atmosphere in such conditions. Results showed that ammonium nitrogen emitted from uncovered storage of digested slurry during the summertime is twice the emission of undigested slurry storage. After land spreading without soil incorporation, ammonia emission is about 60% higher from digested slurry than from raw slurry. As for undigested slurry, to prevent ammonia emission, it is important to use techniques to reduce ammonia losses during the storage and speading of digested pig slurry.