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## **PILOT FIELD DEMONSTRATION OF WOODCHIP BIOFILTERS IN THE TREATMENT OF SEPARATED PIG MANURE DIGESTATE**

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### **Abstract**

Three pilot-scale biofilters consisting of 1 m aerobic woodchip layers and 0.5 m submerged woodchip layers were constructed to treat the separated pig manure anaerobic digestate (SAD). Reductions of 54% dry matter, 80% of chemical oxygen demand (COD), 93% of 5-day biochemical oxygen demand (BOD<sub>5</sub>), 86% of total nitrogen (TN) and 79% of total phosphorus (TP) were achieved. The study results confirm the occurrence of nitrification in the aerobic woodchip layers and denitrification in the submerged layers. The woodchip biofilters can be used for large-scale SAD treatment before landspreading so as to meet the stringent Nitrates Directive.

*Key words:* digested digestate, nutrient removal, pig manure, woodchip biofilters

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