

Biofiltration of Air Emissions from a Hog Barn Waste Treatment Facility

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Odour from the storage and spreading of wastes from intensive hog production facilities has represented a challenge to the human olfactory system for some time. Over the past five years research investigating the control and treatment of odour has been in effect.

During the past eight months Alberta Research Council biofilters were re-located to the University of Alberta Farm to investigate their effectiveness in treating odour from the pig barn waste collection system. Using olfactometry and hedonic tone analyses, the level and quality of biofilter treated air emissions from the waste collection system were assessed. Data will be shown that indicates biofiltration is an effective odour control technology for intensive hog operations.

Implications:

Although during biofiltration the odour level decreased very little the offensiveness of the odour changed significantly. The influent air from the waste collection system was highly offensive, however after treatment using biofiltration the effluent air from the biofilter had an acceptable odour quality.