

Research theme	Agri-Environment
Project title	Onfarm combustion and energy recovery from poultry litter
Project reference	07 559
Abstract	<p>The competitiveness of the poultry industry is highly dependent on energy costs (primarily heating) and the management and disposal of poultry litter. Current poultry litter management practices are seen as unsustainable and alternative solutions are required. A potential solution is the use of on-farm fluidised bed combustion (FBC) which has the dual benefit of a cost neutral heat source as and reducing the litter volume to 10 % of the original. This is an Irish technology, developed and commercialized locally. This project will address some outstanding regulatory and technical issues required to utilize this technology. The project will determine the litter fuel quality and optimize combustion through monitoring of flue gas emissions including the potential for dioxin formation. This will facilitate establishment of best practice to meet the regulatory requirements of IPC licensing. The project will optimize the thermal efficiency and reduce maintenance requirements by matching heat exchanger output with heat load and through the use of buffer tanks. The nutrient value of the sterile ash will be determined and its economic value established. It will monitor flue gas emissions including dioxin, building a dispersion model based on local topography and meteorology which will be included in an environmental impact study to assist compliance with national IPC regulations. It will undertake a risk assessment and decide best practice for the management and storage of the litter prior to combustion. The cost-benefit model for the poultry producer will be established.</p>
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Lead organisation	UL
Collaborating institutions	UL, UCD, Teagasc Athenry
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