

THE CAPACITY OF WILLOW TO CONSUME EFFLUENTS AND SLUDGES

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In the current economic climate in the UK, the production of energy crops such as short rotation coppice willow is marginally profitable. At the same time, the routes for the disposal of municipal sludges and effluents are diminishing because of pressure from the large multi-national food retailers to restrict food production to ground that has not been subject to the application of those sludges.

One solution is to use willow coppice as a recycling route for sludge, as it is not part of the food chain. Yields can be increased using the sludge as a fertiliser and the gate fee for receiving the sludge adds value to the economics of the energy crop.

However there are risks associated with the application of sludge to willow, including:

- Nutrient loading
- Nutrient run-off
- Application of Potentially Toxic Metals to the soil (PTEs)
- Chemical composition of ash resulting from the combustion of willow that has been subject to sludge application

This paper assesses those risks and attempts to quantify them with relation to the legislative and environmental circumstances extant in Northern Ireland.