

Reed Canarygrass (*Phalaris Arundinacea*) for Local, Sustainable Energy Crop Production on Non-Agricultural Marginal Lands

Short introductive summary:

Reusing derelict underutilised neglected land for energy crop production could avoid the ethical conflict of using agricultural land and reducing food production. Possible land types include brownfields, previously developed land, contaminated land, former landfills or mining areas. These marginal lands raise new challenges for agronomy and the potential for contamination of suitable energy crops must be considered. This paper presents the results of long-term full-scale field trials on brownfield sites in NE England, established as part of the EU Life BioReGen Project (Biomass, Remediation, re-Generation: Reusing brownfield sites for renewable energy crops). Over five years the establishment, survival rates and harvested yields of reed canarygrass (*Phalaris arundinacea*) outperform those of short-rotation coppice willow clones or *Miscanthus giganteus* at every site. This native energy crop is also cheaper and faster to mature than the conventional ones, grown from broadcast seed and producing annual harvests after the second season. Ash contents, contaminant uptake, alkali contents and ash compositions are all found to be acceptable (see *Biomass & Bioenergy* 78 (2015), 110-25).

Presenter: **Richard LORD, University of Strathclyde, Civil & Environmental Engineering Dpt., Glasgow, UNITED KINGDOM**

Presenter's biography:

Dr Richard Lord is Director of Knowledge Exchange and Senior Lecturer in Engineering Geoscience and leads research on sustainable biomass provision from non-agricultural land and reuse of contaminated wastes as part of the circular economy.

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Co-authors:

R.A. Lord, University of Strathclyde, Glasgow, UNITED KINGDOM

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