Integrated Systems for Farm Diversification into Energy Production by Anaerobic Digestion: Implications for Rural Development, Land Use & Environment

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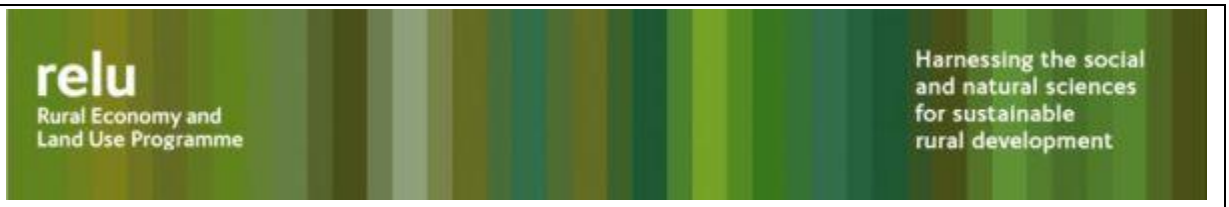
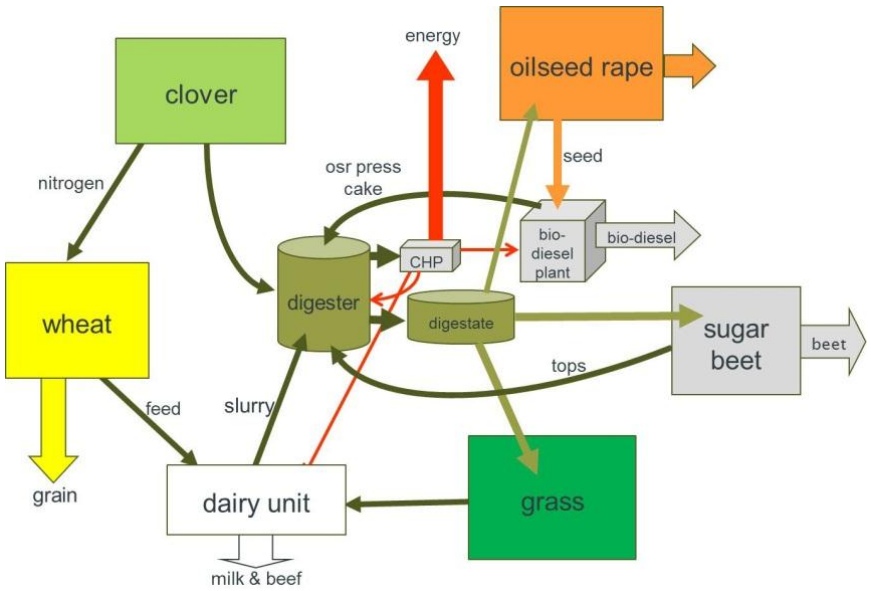
Related website	http://www.AD4RD.soton.ac.uk/	

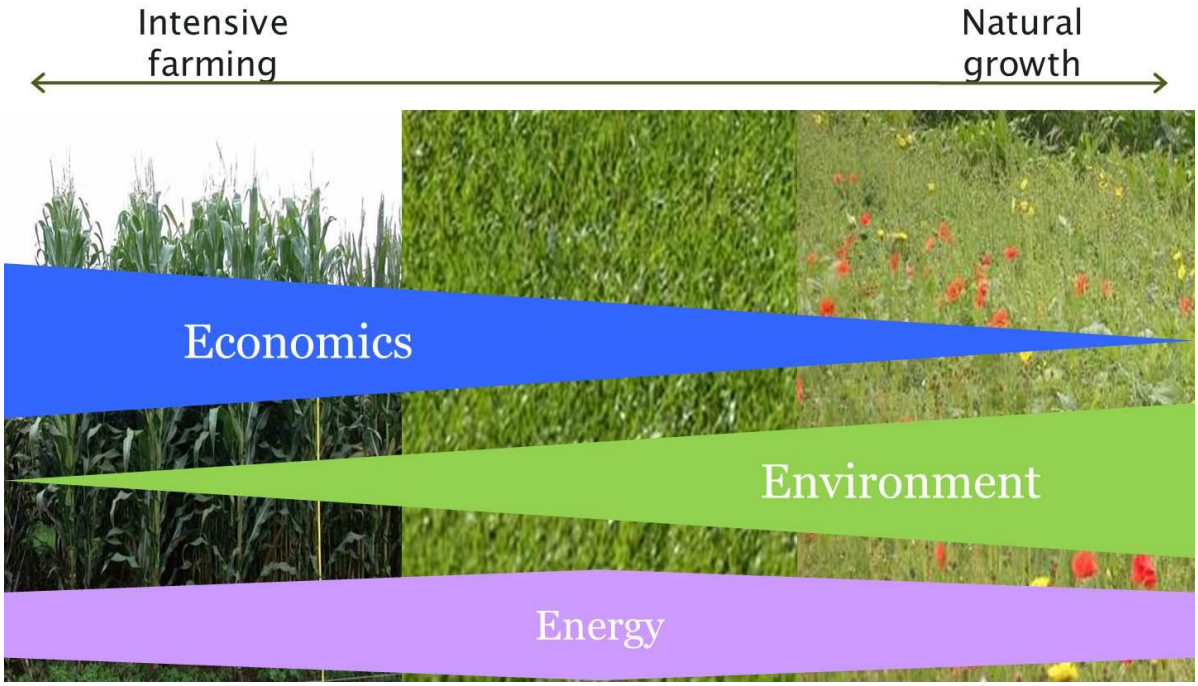


The project was formed from a multi-disciplinary team formed to examined the potential for development of anaerobic digestion (AD) on farms, and the contribution that this could make to rural development and diversification of agricultural practice by enhanced land use planning for bioenergy production. The research was set in the context of a rapidly developing European agenda aimed at both strengthening the rural economy and protecting the environment.



An integrated approach to farm energy production

The multi-disciplinary nature of the research team allowed it to include a broad range of aims and integrate thee into an overall perspective view of the impact of AD on farms. The research therefore: addressed the policy issues through a detailed analysis of regulatory measures within the broader European Community and of those specific to the UK, identifying the drivers and obstacles that stimulate or inhibit the development of on-farm digestion as part of a wider strategy for rural development and meeting the cross compliance criteria included in the reforms to the Common Agricultural Policy, developed and used rigorous models to analyse the economics, energetics and land use implications of diversification into on-farm energy production using energy crops, agricultural residues and wastes; assessed the positive benefits and the potential drawbacks regarding environmental protection and the development of sustainable agricultural practice, through the development of environmental risk based analysis methodologies; sought opinion from farmers on issues of diversification and renewable energy production using AD; and explored the potential benefits to the wider rural community that might result through the uptake of this technology as part of an integrated farming system.



Varying impacts of farm scale and type on economics, environmental impact and energy

The research produced a comprehensive range of outputs including journal and conference papers, as well as presentations to the AD community farmers and government bodies.

Collaborators

School of Biology, University of Southampton
Centre for Agricultural Strategy, University of Reading
School of Agriculture, Policy and Development, University of Reading

Related Sites

http://www.ad4rd.soton.ac.uk/
http://www.relu.ac.uk
http://www.cropgen.soton.ac.uk

Publications

Banks, C.J., Salter, A.M., Heaven, S., Riley, K. (2011) Energetic and environmental benefits of co-digestion of food waste and cattle slurry: A preliminary assessment. Resources, Conservation and Recycling 56(2011) 71-79

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Tranter, R.B., Swinbank, A., Jones, P.J., Banks, C.J., Salter, A.M. (2011) Assessing the potential for the uptake of on-farm anaerobic digestion for energy production in England, Energy Policy, 39(5), 2424-2430

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