

PRESS RELEASE

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**Anaerobic digestion on farms could turn agriculture green**

A typical dairy farm could supply most of the electricity it needs to milk the cows, by converting their manure into energy. And it would help the Government to hit green energy targets and cut greenhouse gas emissions, according to researchers from the UK research councils’ Rural Economy and Land Use Programme.

The interdisciplinary project, based at the universities of Southampton and Reading, has researched the potential for small-scale farm-based anaerobic digestion plants. It found that relatively small digesters could be economically viable when fed with mixtures of animal slurries and imported wastes or energy crops, and had the potential to boost the profits of both arable and dairy farms.

Wider adoption of the technology would also help farming to become greener. Digesting the slurry produced by one dairy cow has the potential to reduce methane emissions by 25 kg, and generate 1000 kWh of electricity per year – equivalent to three months’ electricity consumption for an average household,

The digestate left at the end of the process is a valuable fertiliser if spread on the land, reducing the amount of money farmers spend on artificial fertilisers - and also saving the CO2 emissions involved in their production.

Anaerobic digestion is a very flexible technology, which may be used to process a wide range of agricultural crops, crop residues, animal wastes and imported food wastes, into usable energy.

The team also researched public attitudes to the building of anaerobic digestion plants in rural areas. Consumers tended to support the idea, particularly if cattle and pig manures were used to feed the digester, but most were also happy for food crops to be used. They thought that the most important benefit was that the digesters provide an alternative to landfill for organic waste, including waste food.

Professor Charles Banks from Southampton University who led the research said: “Other European countries have forged ahead with this technology. But although the UK Government has expressed its support, this has still not led to widespread adoption of the technology on farms.

“This research has shown that there is an economic incentive for farmers, but further encouragement may be necessary, and perhaps some financial support for demonstration projects. Widespread adoption could provide multiple benefits, not just for the farmer but also for the environment.”

Notes for editors:

1. The Rural Economy and Land Use Programme is an interdisciplinary collaboration between the Economic and Social Research Council (ESRC), the Biotechnology and Biological Sciences Research Council (BBSRC) and the Natural Environment Research Council (NERC), with additional funding provided by the Scottish Government and Defra. See [www.relu.ac.uk](http://www.relu.ac.uk) for more information about the Relu programme.
2. See Relu’s [Policy and Practice Note no 26](http://www.relu.ac.uk/news/policy%20and%20practice%20notes/26%20Banks/PPN26.pdf) for more information about the project findings.
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