

FOCUS ON RENEWABLE ENERGY ROB SEEX

Rob is a Gloucestershire dairy farmer, milking 110 cows on his 140 acre dairy. In 1993 he installed a 25 cubic metre anaerobic digestion system, which takes approximately 5 cubic metres of slurry per day. The gas generated is then used to heat two houses on the farm and the digestate as a natural fertiliser. While the heating produces benefits by reducing the amount of fossil fuels the farm needs for heating, the system also produces several other environmental and economic benefits. In this case study, Robert outlines the detail behind his project...



- 140 acre, 110 cow dairy in Gloucestershire
- 125 cubic metre anaerobic digester
- £60,000 investment
- Pay-back of 10-12 years after installation
- Energy used to heat two farmhouses

THE DETAIL

How much did the system cost to install?

The system was installed a number of years ago, and back then it cost approximately £60,000. At the time we received a 50% grant from the Rural Development Agency, however, as the technology has improved, if you were to install another similar system now I would estimate it would cost about £100,000.

With the grant, my investment was £30,000 and the system saves me about £1,000 on annual heating bills and £1,500 by not having to buy fertiliser each year. I think this makes my payback about 10-12 years.

What other benefits have you seen?

There was an obvious appeal of using my surplus output to generate another, more valuable resource. One of the main reasons for installing the system in the first place was to reduce my expenditure on artificial fertiliser.

The digestate my system produces seems to be as efficient as the bagged alternative and is also producing an additional benefit of killing the weed seeds in the slurry. My system therefore produces



environmental as well as economic advantages by decreasing the amount we buy.

What challenges have you faced?

Contrary to most stories, planning permission was fairly straight forward for the AD system, and actually it was more complicated when applying to install a simple slurry lagoon!

The system can also require some maintenance. This has significantly reduced since we removed the separator and ironically, reduced the amount of automation. Now, I just need to check the levels daily, rather than having to spend half an hour every morning sorting the system out.

The system also needs monitoring particularly in winter as a vicious cycle can develop where the temperature drops in the tank, so less gas is produced and with less gas, the temperature can drop further.

What do your fellow farmers think?

I have conducted a few farm walks and everyone is interested in the AD system, particularly as it is a lot smaller and more manageable than many other installations. With the right funding and support, AD can utilise a large resource to help offset heating bills, and save on fertilisers, which I think will help many farmers reduce their farm expenditure.

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'The figures and information expressed in this case study are specific to the farm involved. Farmers should take their own professional advice about the likely costs and benefits of using renewable energy, and take professional advice about the legal, tax, planning and SPS / agri-environment scheme issues that may be involved in renewable energy installations.'

For advice and information on how to apply this approach to your own farm, take a look at [FACTSHEET 17: FOCUS ON FARM ANAEROBIC DIGESTION](#)

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