

Technology Fact Sheet

Anaerobic manure digestion to produce biogas fuelsⁱ

1) Technology status

- Addressing environmental pollution due to cattle raising; reducing N₂O emissions; recovering energy to replace burning materials, electricity and gases.
- So far, about 140,000 biogas digesters with an average volume of 10 m³ have been built and active, serving 1 million people and reducing million tones of CO₂e.

2) Social, economic and environmental benefits

- Cost for a family biogas digester (6-8 m³) in 2006 was 5 million VND (according to 51% of surveyed households), using biogas instead of burning fuels and using biogas residues as fertilizer, each family can save 120,000 VND/month, thus the return period for a biogas digester will be 3.5 years. In addition, biogas residues can be used as food for pig, fish, worm, mushroom growing, etc.
- Effective treatment of cattle and human organic waste.
- Toxic waste is well treated by biogas digesters, with COD and BOD₅ more than 90%.
- Creating more jobs, especially in rural areas.

3) Application potential

In rural areas in the North, the formerly Nam Khu 4, South Central Region and the Southern deltas, there will be about 280 thousand digesters by 2020 and 560 thousand digesters by 2030.

4) Barriers

- Limited investment on biogas digester building; requiring governmental subsidies.
- Fragmented livestock ranching and lack of concentrated livestock farms make it hard to develop large-scale digester for farms or for electricity purpose.
- Biogas digester technologies are still under development to be applied in different areas.
- Low range of input, most digesters just use cattle waste, not organic plant waste such as hay, grass, etc. Lack of input materials for biogas digesters.

ⁱ This fact sheet has been extracted from TNA Report - Mitigation for Vietnam. You can access the complete report from the TNA project website <http://tech-action.org/>