
WRAP – AD Promotion, Quality Control and Standards

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Introduction

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Food waste – the hidden resource?

- **16-18Mt/y**
 - ≈ 6.7Mt/y household
 - ≈ 4.1Mt/y industrial
 - ≈ 4.6Mt/y food service & supermarkets
 - ≈ 1 – 3 Mt/y other commercial & agricultural
- 4 times our body weight / year
- 1 tonne food waste = 300kWh electricity based on 37% efficiency



Drivers – why AD for the UK?

- Climate change
- Renewable energy generation capacity
- Waste reduction and recycling
- Sustainable farming & diversification
- Environmental protection & water management

Finland



Sweden



Denmark



Germany



Scotland



Outputs from AD

- Biofertiliser – direct fertiliser replacement value
- Biogas – heat & power



- Nutrients
- Organics matter
- Water holding Capacity
- Soil workability
- Soil manufacture
- Weed –free
- Energy
- Efficient use of resources



Biomethane uses



PAS110

The background of the slide is a photograph of a bright blue sky with large, fluffy white cumulus clouds. The clouds are concentrated in the lower half of the frame, with the sky being a clear, deep blue above them.

PAS 110 – The need for a quality standard

- Confidence in a product for the right use
- Clarity for regulators and regulated
- Waste status a barrier

- Development of a quality protocol depends on the existence of a quality specification
- Builds on experience of PAS100

Key elements of PAS110

- Defined input list
 - Source segregated biowastes
 - Biodegradable non-waste materials
 - Allows for packaged biowaste
- Supply agreement with the waste supplier
 - AD operator knows what inputs are
 - AD operator undertakes analysis as appropriate
- Process control – HACCP
 - A badly run digester will produce a bad product
- Minimum quality of whole digestate, separated liquor & separated fibre

Pasteurisation

- ABPR treatment or equivalent for all waste
- Pasteurisation required if material moved between farms
- Not required if the input material is produced and used on the same farm

Sampling and analysis

- Detailed set of determinands
 - reduced for on farm processes dealing with on farm wastes
 - covers pathogens, PTEs, stability, physical contaminants
 - nutrients for declaration only
- Quality is controlled via known inputs not through end products testing
- Sampling frequencies defined pre & post validation
 - related to input tonnage
- Further work on stability ongoing

AD Quality Protocol

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Quality protocol for the production and use of quality outputs from anaerobic digestion of source-segregated biodegradable waste.

- Required by the Environment Agency to define when the digestate can be used as a product rather than a waste
- Describes how to use the digestate – not what to produce
- Won't be applicable in Scotland

Main purposes of a protocol

- Clarifies when waste controls are no longer required
- Ensures environmental protection
- Provides users with certainty that the product conforms with a standard



QP markets

Two markets

- Agriculture
- Land restoration



- Not growing media at this stage

Partnership approach

- Exposure pathway assessment – Cranfield University
- Financial impact assessment – AEAT
- Technical report – QP technical advisory group
- Consultation

Key elements of QP

- Waste list
- Requirements of a standard
- Requirements for records to be kept including records of use
- Requirement for supply documentation for the digestate
- Requirement for independent certification

Progress

- QP complete and awaiting sign-off by European Commissions Technical Standards Committee
 - Formal issue 2009

- PAS110 awaiting final work on stability and PTE limits
 - Aim to finalise Spring 09
 - Will be available as pdf

Supporting work

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Government capital support for AD

- WRAP organics capital grant programmes
 - proven technologies
 - 2 rounds launched
 - £17M (England, Scotland, NI)
- WAG funding for Wales
- New ETF programme
 - cutting edge technology
 - £10M (England only)

Supporting work – AD industry

- Code of practice for operators
- Operator training
 - 2 pilot courses Feb / Mar
- Support for certification scheme
- Template documentation
- Case studies

Supporting work - agriculture

- Confidence in compost programme
 - budget of c. £250k over two years
- Programme of stakeholder engagement and risk assessment activities, leading to:
 - Specifications for compost use in different agricultural sectors
- Spring / summer 2009

What about digestates?

- Included in 'Composts in UK agriculture' risk assessment
 - Are any risks identified for composts different if the same feedstocks are digested instead of composted?
- Development of specific guidelines for digestate use are next in the queue
 - May not differ significantly from those for compost

Thank you
Further information:

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