Making it work – The Farmer’s perspective

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Format

1. Background to Bedfordia
2. Practical experience – feasibility to operation
3. Bio-fertiliser and the soil
4. Integrated management system
5. Questions
Background to Bedfordia

Bedfordia Group Plc
Head Office
(Management, Finance, HR, IT & Marketing)

Agriculture
Bedfordia Farms
  - Arable
  - Grain Storage
  - Pigs

Property
Bedfordia Property
  - Investment
  - Developments

Automotive
Bedfordia Motor Holdings
  - Elms
  - BMW
  - Saab/Jeep Bodys shop

Eco-Technologies
  - Biogas

Methane to Markets
Background to Bedfordia Biogas

• **Own operational plant**
  - c 40k tonnes of product – ABP compliant
    • 30k food waste
    • 12k slurry
  - 1.1 to 1.2MW electrical output

• **Complete integrated solution**
  - Bio-fertiliser used on farm

• **Industrial plant in farm situation**
  - Designed to be flexible

• **Licenses**
  - WML, ABP, OFGEM
Background to Bedfordia Biogas

- Develop a national network of plants
- Aim to have 10 to 12 operational over the next 5 years
- Processing food chain waste – 300 to 400k tonnes
- Further plans beyond this time frame
- Provision of expertise from concept to operational management
  - Feasibility
  - Design
  - Planning
  - Construction
  - Funding
  - Licensing
  - Waste & energy contracts
  - Running & operating
Practical experience - operational

- **Long lead in times**
  - Feasibility & planning
  - Construction etc

- **Technical - plant**
  - Mechanical and electrical ‘teething problems’
  - German approach different to UK

- **Complexity**
  - High degree of management expertise
  - Bio-security
  - Steep learning curve
Practical experience - operational

- **Biology**
  - Support and testing very important
  - Commissioning critical
  - Patience & steady approach

- **Food waste**
  - Excellent green credentials for PR
  - Sourcing waste through partnership
  - Culture change for waste producers
  - ‘Quality’ & acceptance criteria a must
Practical experience - licensing

- **Animal By-Product regulations - DEFRA**
  - SVS helpful and practical at the design stage
  - But.....regulations changing......difficult to plan

- **Waste Management license - EA**
  - New to EA & heavily bureaucratic
  - Not particularly helpful apart from local officers

- **OFGEM accreditation**
  - New to OFGEM
  - Helpful but slow and bureaucratic
Market barriers to development

- Finding suitable sites
- Manufacturing production capacity
- Lead in time to full operational
- Skills gap
- Government support for AD
- Digestate standard
- Other technologies
Bio-fertiliser and the soil - benefits

- Valuable product
- Sanitised - pasteurisation
- Excellent nutrient availability
- Organic Matter
- Relatively slow release
- Virtually odourless
- Ability to be pumped – around 5%DM
- Homogenous
Bio-fertiliser and the soil - issues

- No digestate (bio-fertiliser) standard in UK
  - Requires paragraph 7A exemption form EA for application
- Cost of application infrastructure
- Storage
  - NVZ’s
- Timing of application
- Possible soil structure damage from machinery
  - Umbilical
  - Irrigation gantry
- Requires excellent management
Integrated management system

By kind permission of Greenfinch
Integrated management system - Summary

- Excellent integrated project
- Fits very well into farm situation
- Superb green credentials
- Recycles and recovers renewable energy
- Commercially sound with economies of scale
- Provides valuable fertiliser
- Adds value to slurry
- Reduces pollution
- Diversification
Thank you for listening!
Questions?

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