

## REAL's Research Hub

### Project #2 – Project Brief

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#### 1 Project Title

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To develop a 'data pack' on the properties, characteristics, and content of digestate that will provide context for the development of new uses of outputs from Anaerobic Digesters

#### 2 Background

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Arising from Government policies to increase the collection of household food waste, coupled with a growing desire for food manufacturers to recycle waste products, there is a projected rise in demand for anaerobic digestion with a consequent increase in the available digestate.

The principle use of digestate is as a soil amendment, providing soil conditioning and nutrient input. As a result of limited land bank availability and constraints on timings of application (due to agronomic need and environmental protection measures), there is a risk of surplus digestate which must be dispatched.

#### 3 Project Definition

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The project will build on the information gained from the Research Hub's first project 'The development of a Research Library for the Organics Recycling Industry' and will consist of three phases, with the aim to provide a valuable resource for the anaerobic digestion industry as well as those concerned with circularity principles and waste-derived products.

Project phases:

- I. The first phase of the project will concentrate on gathering information on the diversity of digestate characteristics produced across the UK, and how these characteristics relate to the feedstocks of the digesters. Data will be gathered from REAL's database and other nationally held databases. It is anticipated that this would also include data collated by industry bodies such as ADBA and the European Biogas Association. This phase of the project will assist in providing benchmark data for the various feedstock combinations used across agricultural and commercial AD operations.
- II. The second phase will involve detailed discussions with Biofertiliser Certification Scheme operators and operators across Europe, on how innovative uses of digestate may be developed, and the potential technological barriers to these innovations. Environmental Regulators and APHA will be involved in conversations to determine possible regulatory issues. AD operators will identify uses, other than direct application to land, for the outputs of AD plants. For example, producing

concentrated fertiliser liquids from the digestate liquor and combining digestate fibre with other products (e.g. biochar), to produce dry pelletised soil amendments which could be applied year-round.

- III. The final phase will examine the commercial viability of the options for outputs of digestate. A top-level examination of the various ideas for alternative use of digestate in the context of competitive advantage/disadvantage will be conducted.

### **3.1 Project Objectives**

- ❖ To gain a more complete understanding of the nature and variability of digestate characteristics in the UK
- ❖ To unveil innovative ideas for the diversification of digestate outputs and growth of the market
- ❖ To provide a platform for future discussion with the relevant competent authorities such as the Environmental Regulators, OFGEM, DEFRA and APHA and wider EU bodies; innovative uses of digestate discussed during the second phase of the project will be considered further. In addition, the platform will ensure consistency of approach to end-of-life waste definitions. The role of subsidies in supporting the environmentally acceptable alternatives for use and value of digestate will also be discussed

### **3.2 Project Deliverables**

- ❖ A database of digestate characteristics (accounting for feedstocks) to include chemical and physical characteristics (e.g. size and type of organic matter), and any additional data (e.g. example calorific value and COD/BOD)
- ❖ Innovative ideas for digestate products and derivatives, and a “roadmap” for supporting research and subsidy support necessary to bring these to market

