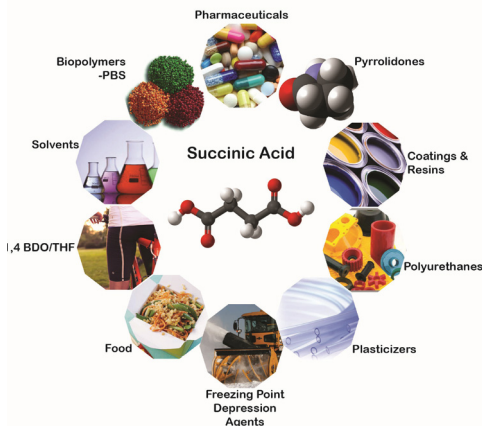


ADMIT

ADMIT Bio-SucInnovate is a Climate KIC funded project which aims to develop a range of technologies and processes that will contribute to bringing advanced biorefining to the market, most notably focusing on the production of fermentable sugars from non-food lignocellulosic resources and processes that can be used to make valuable chemicals and polymer building blocks.



Harvesting of biomass (miscanthus) for processing



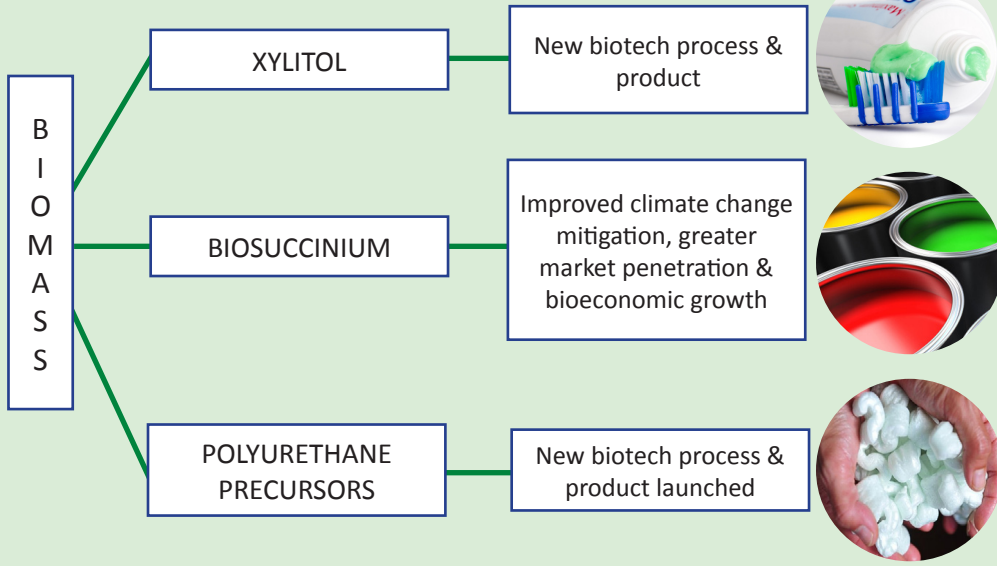
The project encompasses a holistic, integrative approach to drive innovations that enable dedicated nonfood crops and agricultural residues to be refined into a range of sustainable added-value products and markets. In order to maximise the economic and environmental sustainability of the lignocellulosic sugar platform, the majority of the biomass components need to be utilised

and commercially exploited. A key project objective is to demonstrate the production of bio-succinic acid from the C6 sugar fraction and assess the impact on GHG emissions against current processes using techno-economic analysis and life cycle assessments. Furthermore, development of novel, multifunctional enzymes will be conducted to simplify the biorefining of complex (toxic) C5 streams derived from hemicellulose processing, thus provide commercial uplift for SME's and a lignocellulose driven supply chain.

For the valorisation of the C5 stream, biotechnological tools will be developed to produce natural sweeteners e.g. xylitol at a commercially relevant scale.

Bio-SucInnovate

LCA & Carbon Stock Management



The lignin stream will be purified to enhance its value added application (e.g. polymer building blocks, green chemicals, fibre) thus ensuring the complete utilisation of biomass.

In addition to the technical and commercial outputs, the project findings will be of strategic importance to the bio-economy platform, industrial biorefineries and policy makers.

Summary

Project Lead:

Dr David Bryant
dgb@aber.ac.uk

Lead Institute:

Aberystwyth University

Project Partners:

LCAworks, University of Geneva, Ecometrica, Reverdia, CIMV, Rothamsted Research, DLO-FBR Wageningen, INRA, Alterra, Imperial College London & the University of Debrecen

Sponsors:

Climate KIC

Institute Project Value:

£1,590,478 + £252,000
4 x PhD studentships

Total Project Value:

€13.83 Million