BEACON

From plants to products
O blanhigion i gynhyrchion

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A BEACON of light for the green economy

The BioComposites Centre, part of the Welsh Institute for Natural Resources at Bangor University, is a partner in a newly announced £20m programme called BEACON, which will boost the green economy by helping business in North Wales, West Wales and the Valleys. BEACON will develop new technologies to turn locally grown plant crops into commercial products and details of the initiative were announced by Deputy First Minister, Ieuan Wyn Jones AM, at the Senedd, during the official launch for the project (Tuesday, 15 February 2011).

Led by Aberystwyth University's Institute of Biological, Environmental and Rural Science (IBERS), with partners from Bangor and Swansea Universities, the BEACON initiative will use pioneering physical and chemical technologies, as part of a process called as bio-refining, to assist Welsh companies in developing novel low carbon technologies and new ways of making products that are traditionally manufactured from crude oil.

Backed with £10.6 million from the European Regional Development Fund, BEACON aims to establish Wales as a Bio-refining Centre of Excellence and make a vital contribution to tackling climate change. It will work with companies to convert crops, such as rye grass, oats and artichokes, into products including pharmaceuticals, chemicals, fuels, cosmetics and textiles.

The Deputy First Minister, who is also the Minister for the Economy and Transport, said: "We are committed to building upon the expertise within our Universities and industry to develop new technologies and products which will increase our competitiveness and position Wales on a global platform.

"Stimulating innovation through R&D is at the heart of *Economic Renewal* driving forward productivity, economic growth and increasing prosperity across the region."

BEACON will build on research already underway at IBERS to produce fuels from energy crops such as high-sugar grasses like rye.

Bangor University will build on its established track record in biocomposites research to develop new materials from plants which can be used to develop innovative products for the Welsh construction and automotive sectors. Bangor will also focus on the extraction of high value chemicals from plant material for applications in the cosmetics and fine chemicals industry in Wales.

Professor David Shepherd, Pro-Vice Chancellor for Research and Enterprise at Bangor University said: "Bangor has a long and successful track record of cooperative research with companies to find alternative uses for plant based materials which can be grown locally."

"We welcome the opportunity to extend this work as part of this new venture which will promote the opportunities offered to Welsh businesses by adopting and exploiting low carbon technologies."

The benefits of bio-refining for Wales:

- Replacing some of the industrial chemicals produced from oil with similar molecules from plants that could supply potentially lucrative markets within easy reach of Welsh producers.
- Turning crops such as Rye Grass, Miscanthus, Oats and Artichokes into valuable fuels and chemicals would cut back on greenhouse gases, would increase fuel and chemical security whilst adding value to the Welsh economy.
- Chemicals derived from plants have uses in a range of sectors, including transport, food, health, hygiene and the environment
- They include new materials called bio-composites and bio-plastics
- As well as creating and safeguarding jobs in North Wales, West Wales and the Valleys, the pioneering work will help develop science in Wales.

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