



Realising the Economic Potential of Sustainable Resources Bioproducts from Non-Food Crops

EPOBIO - quick facts

What is EPOBIO?

EPOBIO is a Science to Support Policy project funded by the European Commission in co-operation with the United States Department of Agriculture. The project is entitled “Realising the **Economic Potential** of Sustainable Resources - **Bioproducts** from Non-food Crops”. The project involves experts from many areas of plant science, government, economic and environmental sectors and industry and aims to identify the areas of greatest potential for the use of renewable resources.

What are renewable resources and why are they important?

Renewable resources are sources of energy and products which are theoretically inexhaustible, including the sun, wind, water (tides, waves and currents), biomass and geothermal heat.

As we become increasingly aware of the environmental effects caused by the consumption of fossil fuels such as pollution and climate change, and are also affected by increased oil prices and instability of supply, alternatives to fossil fuels must be developed to sustain our existence. One way of doing this is by establishing a bio-based society which uses substances extracted or derived from plants and biological organisms (such as bacteria) as an alternative to production processes based on fossil fuels. Plants and other biological systems have the potential to provide a wide range of starting materials which can be used instead of fossil fuel derivatives in the manufacture of many of our everyday products.

The areas of biopolymers, plant cell walls and plant oils have been identified as offering the greatest potential to provide useful products from renewable resources.

Why biopolymers?

Whether derived from living organisms (biopolymers) or derived from other sources, polymer materials such as rubber or plastics are widely used in our industries and daily lives. In addition to naturally produced biopolymers, plants offer the potential for high volume production of alternatives to polymers currently made by the chemical industry from petrochemicals.

Why plant cell walls?

Plant cell walls are the most abundant renewable raw material in the world. The digestion of cell walls releases sugars which can be used as a major source of raw materials for industry. Extracting useful compounds from biological material is known as biorefining. Improving the efficiency of the breakdown of cell walls is vital to reducing the energy input and cost of extracting cell wall components.

Why plant oils?

Plant oils extracted from the seeds of oil crops are structurally similar to long chain hydrocarbons from petroleum. Oil crops synthesise a variety of oils suitable for use in the healthcare, speciality chemicals, energy and transport markets. The sustainable production of oil by agricultural oil crops therefore offers major opportunities to reduce our dependence on fossil fuels.

What will the outcomes be?

The EPOBIO project will provide detailed analyses to support policy decisions at the national and European level and future research funding. It will help develop a sustainable society by the introduction of products to the marketplace in 10-15 years time. Our aim is that EPOBIO will increase awareness of the plant-based products and technologies offering alternatives to the use of fossil fuel reserves and result in products of use and acceptability to society in the near future.

What will be the benefits for me?

Developing a European-based core of research in plant-based products will promote competitiveness and create an expert knowledge base to meet future European and global challenges.

The EPOBIO project has the potential to change our societies, economies and industries. This will affect employment and our actions as consumers and members of the public, for example, by the production of bioproducts which have less impact on the environment.

For more information on EPOBIO, please visit the EPOBIO website at: www.epobio.net

website: www.epobio.net
email: info@epobio.net
tel: +44 (0)1904 328761