Industrial Biotech

Enabling a competitive, sustainable and renewable bioeconomy
1. Facilitate the introduction of innovative biobased products on the market

To help achieve this, EuropaBio recommends:

- The implementation of the Priority Recommendations from the Lead Market Initiative to boost the uptake of innovative biobased products on the European market. The first measures tackled should include:
  - Finalisation of the standardisation work on biobased products carried out by Members States and industry in CEN, European Committee for Standardization
  - Building on the results of CEN, set-up of a Europe-wide public procurement system for biobased products, inspired by the US-biopreferred programme.
- Adoption of other market stimulation measures for innovative and sustainable biobased products:
  - The adoption of a specific binding targets for advanced biofuels, either as part of the Renewable Energy Directive or based on the US Renewable Fuels Standard

2. Foster investments through combined financing

Address the barriers to fostering investment, beyond the Biobased Industries Public Private Partnership (PPP), in first commercial operations, such as biorefineries in Europe.

To help achieve this, EuropaBio recommends:

- Facilitation of combined financing mechanisms through simplification of rules and alignment of the basic funding principles of European and national support programmes (including H2020, CAP, Regional development, ESIF, EIB funding and National programmes).
- Reform of State Aid Rules to enable national support for flagship biorefineries which are investment-intensive.

3. Facilitate access to sustainable feedstocks

Put in place measures to enable access to sustainably sourced, competitively priced renewable feedstocks for biobased industries.

To help achieve this, EuropaBio recommends:

- Supporting measures to enable biobased industries to use sustainably grown feedstocks at competitive prices.
- Promotion of agricultural production and efficiency.
- Development of measures to support collection, harvest, storage, and transportation of renewable raw materials, especially agricultural residues.
- Considering the cultivation of agricultural areas which are currently out of production.

4. Encourage open and transparent dialogue around the development of the bioeconomy for Europe

To help achieve this, EuropaBio recommends:

- Helping to communicate on the benefits of Bioeconomy and on the need for it to be developed in a smart, sustainable and inclusive way which recognises and embraces regional opportunities and specialisations.
- Engaging with civil society, together with industry, to encourage the debate on shaping a more competitive, resource efficient bioeconomy for Europe.

5. Ensure the development of coherent, holistic, supportive policy for the bioeconomy and biobased industries along the value-chain

- Integrate the bioeconomy strategy into agriculture, regional, environment, industry, climate, trade, energy and research and innovation policies.
Biotechnology is a central pillar of innovation within the EU and is an essential component of our response to the greatest challenges we face in the 21st Century. Its application provides solutions which create jobs, improve energy and food security, help to mitigate the impacts of climate change, enhance quality of life and enable smarter, more sustainable products and materials making better use of our precious natural resources.

Industrial Biotechnology: from biomass to everyday products

Industrial biotechnology – also known as white biotechnology – uses enzymes and microorganisms to make biobased products in sectors as diverse as chemicals, materials, pharmaceuticals, plastics, food and feed ingredients, detergents, paper and pulp, textiles and bioenergy. As such, it has become known as the Key Enabling Technology of a more sustainable and competitive bioeconomy in Europe.

Industrial biotechnology works by transforming ‘renewable raw materials’ such as biomass, residues and CO₂ into everyday products. This provides an alternative to using fossil sources, such as crude oil, natural gas or coal, as the basic feedstock. It means that the carbon source used as the basis for biobased products is CO₂, either resulting from industrial processes, or absorbed from the earth’s atmosphere and stored in trees, plants and algae which are then used as feedstocks rather than using carbon from newly extracted fossil sources. By using renewable raw materials as feedstock, industrial biotechnology also plays an important role in creating a more inclusive economy, because the renewable feedstocks that it uses often come from European rural and coastal regions where jobs and economic growth need to be boosted.

Potential of the Bioeconomy

Developing a bioeconomy, enabled by industrial biotechnology, is already bringing many economic benefits for Europe and Europeans, adding value to many sectors from farming to forestry, to manufacturing of chemicals, pharmaceuticals and textiles, creating jobs and revitalising Europe’s industrial base in the process. In addition, it brings environmental benefits through the introduction of more sustainable products and processes and through reduced energy consumption and CO₂ emissions.

Industrial Biotechnology is one of Europe’s strengths. The EU is home to world leading, cutting edge academic research and industrial activities and produces more than half the world’s enzymes.

However, the potential of Industrial Biotechnology has been recognised globally and, increasingly, competing regions, such as the US, Brazil, China, Canada and South East Asia offer more attractive and supportive conditions to European industry.
Capturing the potential of the Bioeconomy for the EU

EuropaBio welcomed the publication, in February 2012, of the Commission’s strategy and action plan entitled “Innovating for Sustainable Growth: a Bioeconomy for Europe”.

The aim of the strategy is to develop a more innovative, circular, low carbon economy, reconciling demands for sustainable agriculture and fisheries, food security, and the sustainable use of renewable biological resources for industrial purposes, while ensuring biodiversity and environmental protection.

Critically, the EU Strategy recognised that a key defining feature of the Bioeconomy is its horizontal, multi-sectoral nature. It clearly identified that for the EU to develop a more competitive, dynamic, sustainable bioeconomy, existing and new policy, across a broad range of sectors, needs to be developed in a more holistic, coherent and harmonised way.

As such, Europe needs to engage its decision makers and stakeholders from the fields of agriculture, regional policy, environment, industry, climate, trade, energy and research and innovation, amongst other sectors, to tackle barriers to the sustainable growth of the bioeconomy and to create more opportunities within Europe. Only by tackling policy fragmentation, engaging with civil society and putting in place bioeconomy strategies throughout the member states, can the EU deliver on the ambitious but achievable goals set out by its own bioeconomy strategy.

EuropaBio’s Industrial Biotech Council strongly supports the measures proposed by the EU bioeconomy strategy and in particular their implementation, notably the projects resulting from the BioBased Industries Public Private Partnership (PPP) and the policy measures proposed by the Bioeconomy Panel and Observatory.

EuropaBio was a key initiator of the BioBased Industries PPP, helping to shape its vision and goals and is an active contributor to the work of both the Bioeconomy Panel and the Bioeconomy Observatory.

BBI is an unprecedented public-private commitment because of its focus on bringing bio-based solutions to the market. €3.7 billion will be injected into the European economy between 2014 and 2024.

EuropaBio seeks to strengthen the support for its high value, environmentally beneficial Industrial Biotechnology sector in Europe, by working together with a broad range of stakeholders and decision makers to create a more innovation-friendly framework.

INDUSTRIAL BIOTECH IN FIGURES

A major industry

The “bioeconomy” as a whole is worth nearly €2 trillion and provides approximately 22 million jobs in Europe

Less CO₂ for a cleaner planet

Spares 33 million tonnes of CO₂ emissions. Equivalent to the energy use of 2.5 million homes per year

Greener transport

Thanks to biofuels, 180% plus savings potential from advanced biofuels in cars, rubber tyres, bioplastic parts

More effective detergents

Allow to save up to 30% of the electricity used on laundry by washing at 30°C

Materials (including plastics)

Made from renewable resources instead of fossil fuels

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