



Technological Institute, AgroTech

Foundation

- 1964

Turnover

- 149 M€

Employees

- 1074

Branches

- R & D in
- Bioresources
- Bio-based materials
- Bio-refinery
- Circular economy
- Agro-technology
- Environmental technology

Key materials

- Bio-based plastics
- Natural fibres for multiple applications
- Textiles
- Algae

Key products

- Impartial consultancy
- Technological services



**DANISH
TECHNOLOGICAL
INSTITUTE**

Danish Technological Institute, AgroTech Bio-resources and Biorefinery

Danish Technological Institute (DTI) is Denmark's largest supplier of technological services to industry and society. DTI works on a non-profit basis providing consultancy and R&D services to companies. DTI's mission is to promote growth by improving interaction and encourage synergy between different technological disciplines. Hence, an important goal is to create and transfer state-of-the-art knowledge to applied solutions in the industry. DTI also takes part in and manages a large number of innovative research projects in Denmark and internationally, across a wide range of scientific disciplines.

AgroTech is a division within DTI (Danish Technological Institute) and consist of five centres, where the centre of Bio-resources and Biorefinery is focussed on bio-materials, environmental technologies and Bio-refinery processes.

Working with Bio-based products

In the centre of Bio-resources and Biorefinery working with

- circular economy and product development
- fibre-processing, non-woven processing, enzymatic treatments, upscaling processes etc.
- development of products from plant fibres and waste transforming into building materials, composites, growth mats, textiles and paper- and nonwovens through various technologies.
- development of annual crops for cellulose using new technologies and innovative solutions covering the whole value chain,
- development of fibre mats and conversion of fibres and waste materials into high value products.
- more than twenty years of experience with market-oriented, sustainable and profitable bio-based solutions



Left to right: Hemp fibre bounded with PLA-fiber a growth medium for spicy herbs, nonwoven hemp fibre mats, reinforced bio-composite. Pictures: Bodil Pallesen.



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Service

Biomass possesses a range of basic components with interesting technical properties which can be used in multiple applications and often substitute unwanted materials being hazardous to health. New bioproducts combine the demands for a positive climate print, being biodegradable, and feature lots of environmental beneficial properties.

Products

AgroTech supports companies in product development with bio-based materials in multiple applications and assist in business and market development. AgroTech participate in research and development projects towards new and unknown materials from biomass and conversion of biomass and join biomass and bio- plastic networks. We carry out quantitative impact study on biomass resources from the agricultural sector and the Aquarius sector. We complete tests, development and demonstrations within agricultural technology, biomaterials and bioprocess technology, environmental, and energy technology, the area of domestic animals and food technology and technology within the greenhouse industry.

Case - GreenPack

The bio-based society can come another step forward if we can replace plastic bottles with 100% biodegradable paper bottles, which degrade even if they end up in nature. The GreenPack bottle is made of paper, and may be formed in all 3-D shapes. If the challenge of achieving 100% biodegradable bottle succeeds, it will make a significant difference to the existing packaging solutions.

The consortium behind the GreenPack project wants to replace disposable plastic bottles with a 100% biodegradable bottle that will compost if thrown out into nature. Today, the bio-plastic bottles, of which for example, cola has come up with solutions with a high content of bioplastics, are not degradable when thrown out into nature.

AgroTech is the project manager and helps with product development and testing. Partners include Danish EcoXpac (head partner), Fiber-X (Sweden), AgroTech and Carlsberg.

