
Press Release

Phytowelt receives grant for breeding of innovative poplar varieties

Cologne, Germany, May 31st 2007

The German federal Agency of Renewable Resources (www.fnr.de) is funding a project for the development of new, quick growing, hybrid poplar varieties, improving their properties for renewable energy and as raw material for the paper and chemical industries.

The project involves collaboration of Phytowelt, the University of Göttingen, Germany and the Max-Planck-Institute for Breeding Research, Cologne, Germany. The three-year project will be coordinated by Dr. Thomas Teichmann of Göttingen. Phytowelt's core competence in protoplasting and somatic hybridization should facilitate the production of numerous new poplar varieties in a very short period of time.

"This is a very significant project," explains Dr. Peter Welters, CEO of Phytowelt. „Quick growing tree varieties, which will also thrive on otherwise non-profitable soils, will contribute significantly to the production of renewable energy and provide an outstanding opportunity to reduce CO₂ emissions in the long term.“

Poplar wood is an interesting fuel for heating systems because of its growth characteristics. Additional benefits will come from its low amounts of slag, ashes and pollution, compared to other biomass, when burned. Slag will cause an increasing environmental and disposal problem when the usage of biomass for energy production is increased. It also increases abrasion and corrosion of heating systems. The low nitrogen content of poplar wood guarantees low nitrous oxide emissions during combustion.

The main project goals are the development of fast growing poplar varieties in poor soils, and improved wood properties.

Phytowelt GreenTechnologies is a worldwide company whose core business is agricultural science and plant biotechnology.

Our tissue culture and genetic engineering know-how assists our clients' plant improvement R&D. For example, we can modify the amount, the quality or the composition of different compounds in a plant for sustained production of renewable primary products or alter other features like the morphology or the colour of flowers. Especially, our core competence - **somatic hybridisation** - is used to generate improved plants for conventional variety registration.

Phytowelt GreenTechnologies has mastered key biotechnologies such as *in vitro* cultivation of plants, cell fusion (somatic hybridisation), cryopreservation, transformation technologies as well as plant analysis and molecular marker assisted breeding (**ISTR**).

Our ability to **link plant science and industrial biotechnology** is reflected in our newly created department "Plant-dustrial Services" which supports the chemical industry. For example, through "**phytomining**", we identify, isolate and express genes encoding plant enzymes to be introduced into microorganisms to provide new enzyme activities for fermentation processes.

Another key capability involves the **transfer of knowledge and technology**. We provide plant biotechnology studies and scientific consultancy, assist our clients in finding appropriate partners for their projects and, as an external partner, offer services in project coordination and in the organisation of plant biotechnology congresses and exhibitions.

Phytowelt GreenTechnologies was founded in January 2006 as a merger of **Phytowelt GmbH**, and **GreenTec GmbH**, which originated as a spin-off company from the Max Planck Institute for Plant Breeding Research in Cologne in 1997. The CEO is Dr. Peter Welters. The head office is based in Nettetal, whereas the R&D facilities are located in the premises of the Max Planck Institute for Plant Breeding Research in Cologne. Shareholders of Phytowelt GreenTechnologies are the directors and leading scientists of the institute.

plantdustrial – linking plant and industrial biotechnology

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