



Research News

EU-project 'Sustainpack'

A new EU sponsored research project on 'Innovation and Sustainable Development in the Fibre Based Packaging Value Chain' has started in 2004.

Fibre-based packaging

Cardboard is a many-sided packaging material because of its strength, printability and sustainability (can be recycled). However, the requirements imposed on packaging nowadays go beyond its physical ability to protect the product. Qualities such as barrier against gases, fastening by seals, excellent print results and information provision are now almost common practice for conventional plastics. The next step is to develop new innovative solutions to incorporate this range of qualities into renewable raw materials (wood fibres and bio-polymers).

Nano-reinforcement

The balance between the amount of material and its strength is of great importance in packaging, in relation to costs and robustness in the chain. In 'Sustainpack', research will be conducted into the workings of cellulose fibres and nanoclay particles in nano scale. By integrating this pioneering technology in existing pulverisation operations, the strength of fibre-based materials can be increased, which will eventually lead to a material reduction of 30%.

Recycled composite materials

Other expected innovations are new composite materials of cellulose fibres with 100% recyclable polymers. By blending these materials, the mechanical, optical and barrier properties of packaging can be improved. The aim is to produce renewable composite foils with

properties which are technically and economically equal or superior to those of synthetic polymers.

Other research topics

Other research topics within the 'Sustainpack' project include the development of protective coatings for cardboard packaging, three-dimensionally-shaped products and communicative packaging (printing and coating technologies, ICT and packaging design). Wageningen UR is actively involved in the latter subject.

Results

The knowledge to be generated in the project will take on concrete form in innovative packaging. Examples are new microwave packaging, moisture-resistant and gas-tight boxes, prints which guarantee brand-protection, intelligent packaging and paper-based form-fill-seal packaging options. Wageningen UR Paper and Board is an important player in the 'Sustainpack' project. Research will be performed in the area of material improvement, composite materials and communicative packaging.

Do you also want to join the project?

A European consortium of 14 research institutes, 11 universities and 8 industrial companies has been formed to undertake this research project. Involvement from middle and small companies is particularly being stimulated. They are invited to actively participate, by testing and evaluating new materials or technologies.

Companies can also participate as sponsors. They will be allowed access to the project group or to have a say in the working plans (depending on the contribution).

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