



Avantium and The Coca-Cola Company sign partnership agreement to develop next generation 100% plant based plastic: PEF

Exceptional functional properties make biobased plastic PEF a suitable alternative for future beverage packaging following technology break-through by Avantium

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Dutch research and technology company Avantium has developed a patented technology YXY to produce 100% biobased PEF bottles. Currently PET is the most widely used oil-based polyester. Based on the performance of the new PEF material, Avantium believes PEF will become the next-generation biobased polyester.

Today the company announced an agreement with The Coca-Cola Company (NYSE:KO) to further co-develop Avantium's YXY technology for producing PEF bottles. First milestones include the start-up of an Avantium PEF pilot plant, officially opened on December 8th in Geleen, the Netherlands. It is expected that other large co-development partners will join from early 2012.

Avantium's CEO Tom van Aken: "Our YXY solution for the packaging industry creates a new biobased plastic with exceptional functional properties at a competitive price. We believe it is economically viable and has a significantly reduced environmental footprint. We have already made bottles with exceptional barrier and thermal properties and our production process fits well with existing supply chains. We plan to initiate commercial production of PEF in about three to four years."

PEF can be derived from any biomass feedstock containing carbohydrates, such as sugarcane, agricultural residues, plants and grains. Using YXY as a fast and efficient chemical-catalytic technology, these carbohydrates can be converted into a wide variety of bioplastics.

Current process economic estimates indicate that PEF will be a viable alternative to petroleum-based PET. Says Tom van Aken: "PEF is 100% biobased and when commercialized will be fully recyclable. We believe that PEF fulfills key criteria to become a next generation biobased plastic for food, beverages and other applications. We are very excited about the co-development phase we are entering with The Coca-Cola Company to continue the development of PEF and make this new material ready for mass production and recycling. Their leadership and experience in commercializing biobased materials make them a great partner to work with as we commercialize this exciting new material".

On 8 December, Avantium officially opened its pilot plant in the Netherlands, to start up its YXY process at scale. The pilot plant, with a capacity of 40 tons per year, produces PEF material for application development. The collaboration with The Coca-Cola Company is key to secure a smooth transition into the mass production phase of PEF bottles. Avantium is also actively discussing partnerships with other leading brand owners to develop PEF bottles, fibers and film. In the longer term Avantium will license its YXY technology to enable large scale, world-wide production and use of its biobased plastic materials.

More Information

For more information about Avantium, please contact us at +31 20 586 8010 or visit the corporate website: www.avantium.com or the product website: www.yxy.com

[Click here to read the press statement of The Coca-Cola Company.](#)

About Avantium

Avantium is a leading technology company specialized in the area of advanced high-throughput R&D. The company develops and commercializes YXY - its brand name for the technology to produce chemical building blocks for green materials with exceptional product properties at a competitive price. Combined with the significant reduction in environmental footprint, Avantium's lead application PEF, fulfills all key criteria to become the next generation biobased plastics for bottles, film and fibers.

Avantium has demonstrated the value and commercial potential of its unique technology by collaborating with leading companies in the energy and chemical industries. It has a proven track record in offering fast and efficient chemical catalytic development services and systems to market leaders such as BP, Shell and Sasol. Avantium offices and headquarters are based in Amsterdam, the Netherlands.

About YXY

Avantium has developed YXY (pronounced as icksy) - a family of green building blocks for making materials and fuels that can compete on both price and performance with oil based alternatives, but which have a superior environmental footprint. YXY is a patented technology that converts biomass into Furanics building blocks, such as FDCA (2,5-Furandicarboxylic acid). FDCA is the monomer that can be used for the production of the bio-based polyester PEF (Poly-ethylene-furanoate). YXY has the potential to become the perfect solution for today's challenges, using carbohydrates as feedstock to enable the manufacture of green and sustainable products. This fast and cost-effective production process is based on Avantium's catalytic technology. YXY can be implemented in existing chemical production assets. Avantium is collaborating with leading companies in the industry to develop and produce green materials and fuels based on YXY building blocks. See www.yxy.com for more information.