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Banana fibre technology presents sustainable alternative

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The Papyrus technology, which uses the waste trunk of the banana palm to produce paper and timber products, was developed in response to the increasing global demand for fibre resources with environmentally-responsible manufacturing processes.

"Producing fibre from trees is an inefficient process and has adverse effects on the environment," says founder of Papyrus Australia, Ramy Azer. "The Papyrus process is the result of 15 years of detailed research and selection which identified the banana plant as an ideal supply of fibre. There was previously no economically viable use for the 2.5 billion tonnes of banana trunks that go to waste every year around the world."

According to Azer, a banana plant will produce a new trunk every six to 12 months, unlike timber which has a long growth cycle.

Unlike traditional timber-based fibre production, the Papyrus manufacturing process does not consume any water or chemicals, requires less energy and produces no chemical effluent. In addition, it doesn't contribute to the destruction of natural or purpose-planted forests, potentially saving about 12 million hectares every year from destruction.

Papyrus estimates total carbon dioxide emissions to be less than 10 kg per tonne of raw paper produced. This represents a potential saving of more than 1.5t of carbon dioxide per tonne when compared with traditional methods.

The technology is able to produce a range of fibre products including veneer, paper, cardboard, chipboard and fibreboard.

Papyrus Australia started producing commercial quantities of fibreboard and veneer products in November 2009. The products, branded Beleaf, are currently exported to Europe under a distribution agreement with European veneer company, 3W Tout Bois.

"Our Beleaf products have unique characteristics. They are water-repellent, fire-retardant and are stronger and lighter than most conventional timber-based fibre products. They do not transmit moisture, grease or solvents and have a distinct look and feel," says Azer.