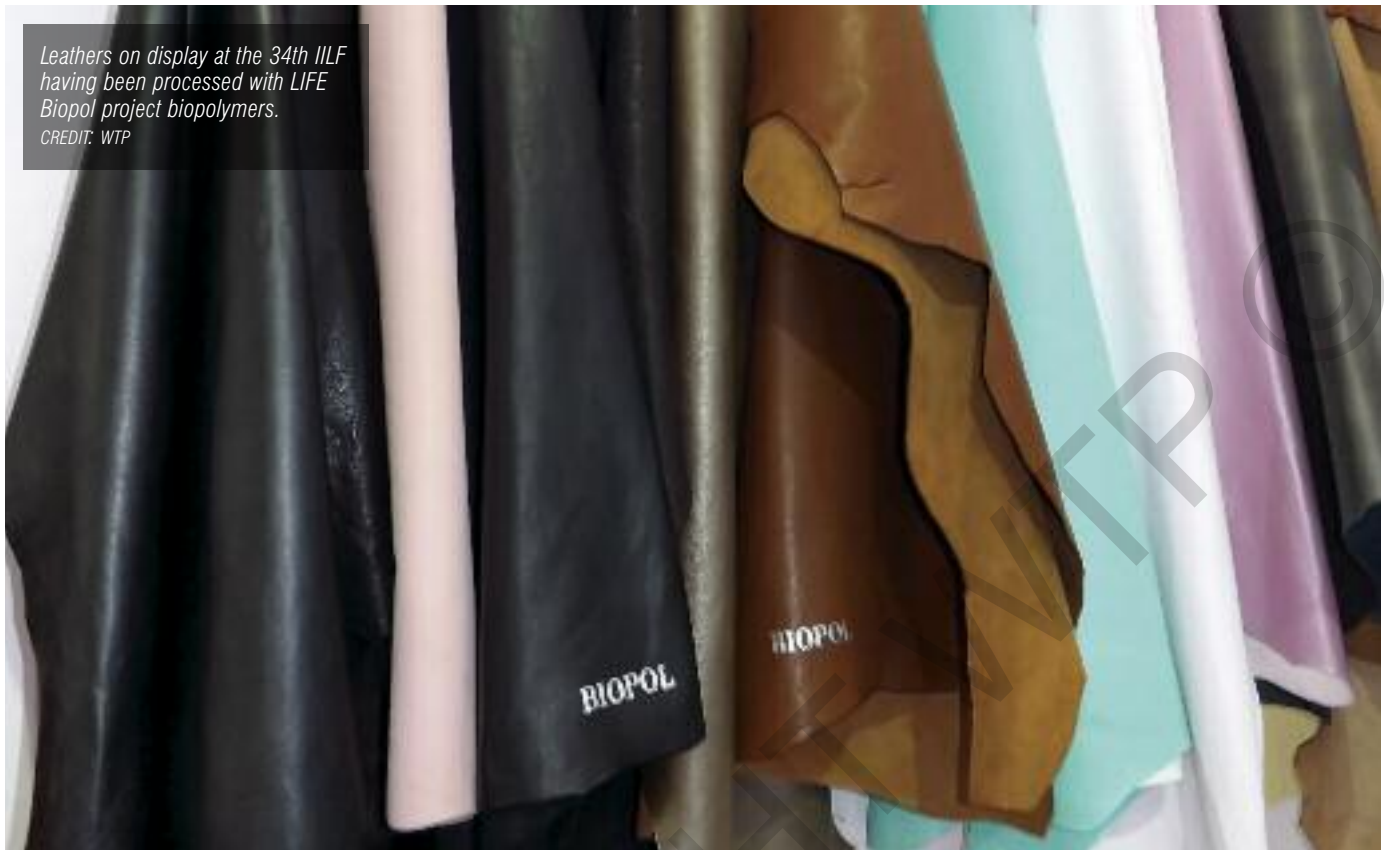




Leathers on display at the 34th IILF having been processed with LIFE Biopol project biopolymers.
CREDIT: WTP



LIFE Biopol project moves out of the laboratory

During the 2019 India International Leather Fair (IILF) in Chennai, World Leather sat down with commercial director wet end for Smit & zoon, Arnaud Backbier, to discuss the LIFE Biopol project that the company has been involved with through Codyeco, the Italian leather chemicals producer it acquired in 2017.

LIFE Biopol is a European Union co-financed project running within the LIFE 2014-2020 programme. The project encompasses private- and public-sector members, including two partner tanneries, Valencia-based Dercosa and Inpelsa, one university (Università Ca' Foscari in Venice), a biotechnology company, ILSA, which specialises in plant-nutrition products, and Tuscany-based leather chemicals manufacturer Codyeco (acquired by Smit & zoon just over a year ago). The basis of the project was to synthesise biopolymers, through enzymatic hydrolysis from various agro-industrial by-products and also from leather industry by-products in the form of wet blue shavings. This transition from waste to resource is looked upon as a route to counter the claim that 30% of the volume of the European leather industry's chemical usage is classed as hazardous substances. The objectives of the project are to design and build equipment capable of producing greener chemicals, enhance reuse of biomass and by-products and, thus, avoid

landfill or other forms of disposal. Another intention is to prove that these new-generation chemicals give the same or better performance as conventional products.

Since its inception in 2016, the project has moved forward and last December new plant, utilising brand-new technology was constructed and commissioned in Santa Croce, Italy. This represented a huge leap forward for the project as the members are now set to work on industrialisation of the lab-based work that has already been carried out. This is now time-critical as the EU project comes to an end in September 2019. When asked whether the goals and targets of the project had been met, Mr Backbier stated that from the laboratory work carried out, both salt reduction and water usage savings had been encouraging and that selecting the correct components from the biomass and being able to convert them to a useable product is on track. Further proof of this is to have it made on an industrial scale and reproduce the achievements seen within the trials.



Arnaud Backbier has a background in the biotechnology industry with emphasis on enzymes, having previously worked for companies within the brewing, baking and dairy sectors. All these areas rely on consistent quality, something that is essential for the production of the biopolymers.
CREDIT: SMIT & ZOON

It is a labour-saving process, replacing conventional products with biopolymer-based alternatives.

Mr Backbier further commented that rather than be too ambitious at this early stage, the aim is to bring one consistent product onto the market and then continue to develop on what has been learned, then to find other biomass components that can be worked on with partners and go forward.

Smit & zoon had a collection of Biopol leathers on display at the 2019 India International Leather Fair in Chennai, all based on small skins. It is understood that this is the focus of the project at this stage, although some work has been done on bovine hides too. The shoe and leathergoods sectors are the areas of most interest at the moment. Of importance to tanners is to deliver leathers at par or better than those produced with conventional technology, whilst also understanding the lifecycle of the products with regards their biodegradability. In this way the aim is also to minimise the environmental footprint of the technology. Asked whether these goals were easily achievable, the honest answer was that there had been some minor limitations. The natural components of biopolymers may have some colour effects, not necessarily an issue with darker colours, so this may be a compromise that tanners are willing to accept.

It is not envisaged that mainstream products will be available on the market for a few years yet but the interest for them is undeniable, both in Europe and the rest of the world. 🌍



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