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5 Innovative Fashion Materials Made From Food By-Products



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I cover fashion in Europe, often with a focus on sustainability



Future Fabrics Expo THE SUSTAINABLE ANGLE

The fashion industry has been using the same limited range of fabrics for centuries.

Cotton, silk, leather and wool are undeniably great materials for making clothes but the surge in clothing production in recent decades has put enormous strain on these limited resources. The number of garments produced each year has doubled since 2000 according to McKinsey calling the sustainability of fabric production into question.

The production of cotton, in particular, has been [linked to soil erosion, soil degradation and water contamination](#) as a result of pesticides and the 20,000 liters of water it requires to produce just one kilogram of cotton, enough to make a single t-shirt.

Synthetic fabrics, such as polyester and acrylic, were hailed as a revolution for cheaper, easier to clean clothing in the early 20th century but we now understand the negative impact they have. Polyester is known to produce carcinogens such as terephthalic acid and ethylene glycol in its production and hundreds of thousands of [plastic microfibers](#) enter our water supply with every wash of it.

Thankfully, a new revolution in material innovation is underway.

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The [Future Fabrics Expo](#), the largest trade show focused on sustainable materials, opens in London tomorrow. Now in its eighth season, Future Fabrics Expo has moved to a bigger venue to meet demand. Over 100 mills will be exhibiting their products which cut a new cloth for a more sustainable fashion system.

Nina Marenzi, founder and director of The Sustainable Angle who organize the Future Fabrics Expo, told Forbes, “The overreliance on conventional cotton and virgin polyester, both reliant on finite resources and polluting in its production, needs to change. Sourcing materials from a wider variety of fibers, including innovations appearing now made from food waste, algae, regenerate cellulose, recycled sources is the way forward.”

Some of the most exciting new fabrics have been developed from agricultural waste. Solving two problems in one, these fabrics are solving wastage caused by our food consumption and turning it into natural, resourceful fibers for the fashion industry.

Here’s five such companies to know from The Sustainable Angle’s network of innovators:

Piñatex

One of the most famous fruit-based vegan leathers on the market, [Piñatex](#), is made from pineapple leaf fibers and has even been spotted on the red carpet of the Met Gala in 2017. By turning the part of the fruit that cannot be eaten, and is usually discarded, it provides an additional income for farmers and is a cruelty-free option for shoes, bags and clothes.

Ananas Anam, the company behind Piñatex, was founded by Dr Carmen Hijosa, whose background in the leather industry inspired the change to a more sustainable alternative.

In March, Ananas Anam is releasing the next generation of Piñatex which will up its sustainability factor by using a bio-based resin, rather than PU, and will also include new metallic pigments made from minerals.

Orange Fiber

[Orange Fiber](#) aims to rescue some of the 700,000 tons of orange peel that are discarded to create juice in Italy every year and transform it into a soft and silky fabric, ideal for clothes. The patented material is similar to viscose in that it is made from cellulose, and can be blended with silk and cotton, but doesn’t involve the cutting down of trees.

Salvatore Ferragamo has recently created a capsule collection using the material which has a premium finish to it, making it an ideal fit for the Italian luxury brand.

Parblex

Chip[s] Board make a range of materials from potato waste suitable for the interiors and fashion markets. [Parblex](#) is their bioplastic recommended for fastenings, buttons and accessories in the apparel world. With a beautiful textured finish Parblex comes in three colors, ‘smoke’, ‘tortoiseshell’ and ‘snow’.

Their waste is currently sourced from McCain and one of the chip brand’s retired regional CEOs acts as an advisor to the company in manufacturing and operations.

Chip[s] Board has a zero-waste production system where even the offcuts from material production are reincorporated back into the process.

Agroloop BioFibre

Winner of the H&M Foundation’s Global Change Award, [Circular Systems](#) creates material from crop residue caused by the farming of hemp, flax, pineapples, bananas and sugar cane. They claim that the leftovers from these five crops alone could produce 250 million tons of fiber, more than two and a half times the current demand.

Without turning this waste into a new product, they are left to rot, producing alarming amounts of methane, or set on fire creating further air pollution.

Circular Systems is making a range of new materials from them instead including packaging, organic fertilizer, biofuel and their textile-grade Agroloop BioFibre.

Vegeatextile

Another fruit-byproduct-turned-leather, [Vegea](#) makes leather from grape marc (the skins, stalks and seeds discarded in the winemaking process).

Resulting in a beautiful, wine-hued, leather without the need for killing animals or toxic tanning, Vegea has received funding from the EU to continue to research and grow and its business.

A couture dress made from Vegea by designer Tiziano Guardini was recently exhibited at the V&A Museum's Fashioned From Nature exhibition in London.

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Olivia Pinnock

Olivia Pinnock has been reporting on fashion from London for the past seven years. As well as interviewing creatives, critiquing the latest trends and covering fashion w... **Read More**