

Branching OUT

PLANT-based materials are a GROWING trend in the fashion industry, finds DANA THOMAS

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lants are the solution to many of our climate woes. Trees and bamboo absorb carbon in our air and store it in the soil. Composting vegetation provides natural fertiliser for crops. According to one study, giving up meat and going vegan can decrease an individual's daily carbon emissions impact by as much as two and a half times.

But what about plant-based fashion?

The fashion industry has long relied on highly polluting materials, such as polyester and nylon – which release microfibres when washed and never biodegrade – and synthetic indigo, which contains such poisons as cyanide, formaldehyde and aniline. Leather is often tanned with hazardous chemicals, and is mostly sourced from industrial feedlots, which, as Stella McCartney notes, “is one of the major causes of global warming, land degradation, air and water pollution, and loss of biodiversity”.

But now, McCartney and others are replacing these harmful materials with plants. Recently, she debuted the Frayme Mylo, a half-moon-shaped handbag made



from mycelium, a leather-like material composed of the root structures of fungi. Hermès, Lululemon, Adidas and Kering have also begun to explore the material's possibilities. “This moment marks a turning point in the history of fashion, paving the way for mycelium products to become mainstream,” McCartney says. “I hope that in five to 10 years, this innovation is seen as the norm.”

Beyond fungi, British brand Lerins has introduced trainers in a material comprised of grape skins from wine production; Allbirds will soon roll out shoes made from vegetable oil and natural rubber; and accessories label Métier has the Roma handbag in a leather-like fabric derived from upcycled waste from the apple-juice industry.

In a bid to substitute PVC sequins, designer Phillip Lim and researcher Charlotte McCurdy created a dress using algae-based paillettes.

Plants are also key to eliminating harmful dyes, as Carry Somers and Lottie Delamain

proved at the most recent Chelsea Flower Show. Their lush installation, “A Textile Garden for Fashion Revolution”, included woad, which the French have long used to turn coveralls Prussian blue, and alliums, whose flowers create a pleasing violet dye and whose bulbs make an orangey-yellow. “Iris rhizomes were used in Scottish tartans for deep blues,” Somers, who was wearing a dandelion and daffodil-dyed linen dress by Anna Mason, told me. (For those who want to try plant dyeing at home, Bella Gonschorovitz spells out the process in her book, *Grow, Cook, Dye, Wear.*)

Meanwhile, in the US, Sarah Bellos, founder of eco-dye company Stony Creek Colors, has developed the first natural indigo for the industrial supply chain in a hundred years. Bellos is currently running performance trials for IndiGold natural indigo in denim mills used by Levi's – if all goes well, the dye could be available commercially next year. The beauty of natural indigo is that it requires no pesticides – bugs don't like it – or fertilisers, because, as with soybeans, it revitalises soil with nitrogen. So it's a double winner!



Above: apple leather and linen bag, £1,550, METIER. Right: mycelium bag, £1,995, STELLA MCCARTNEY