

SUSTAINABILITY

## Rising tides, rising strides: apparel manufacturers adjust as climate shifts

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Danish ready-to-wear clothing brand Ganni is experimenting with Celium and fungi-based fabrics. Image credit: Ganni

By EMILY IRIS DEGN

As the environmental emergency at hand worsens, many consumers are opting for lifestyle changes that can either lessen their own contributions to the issue or help them adapt to the new climate.

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Among these shifts is a growing embrace of leather alternatives and other bio-friendly fabrics and materials. Luxury fashion brands are stepping up to meet this demand, from presenting mushroom-based bags to showing off shoes made from bananas.

In the raw

Materials sourced from nature are proving to be luxury labels' ticket to this overhaul at hand.

Animal byproducts are especially scrutinized for their environmental footprint, and the devastation wreaked on rainforests around the world. Leather specifically is catching heat for its specific role in land clearing, with cattle farming for beef and leather products responsible for 80 percent of Amazonian deforestation according to Yale University's Global Forest Atlas tracker another major industry is soy, of which 80 percent goes to animal feed rather than tofu or soy milk production.

As a result, one bag made from Brazilian leather is equivalent to over 10,763 square feet - just under a quarter-acre - of cleared land, according to the nonprofit Collective Fashion Justice.

Together, this alliance uses Indigenous wisdom and artisanal practices to create a completely animal-free and petrochemical-free leather alternative.

The leather alternative is derived from Shiringa trees, without causing any harm to them.

[pic.twitter.com/bLumiXwZY2](https://pic.twitter.com/bLumiXwZY2)

Collective Fashion Justice (@Co\_Fash\_Justice) July 3, 2023

While vegetarian leather often receives criticism for its inclusion of plastics, British fashion house Stella McCartney's synthetic leather has an environmental impact that is 24 times smaller than that of Brazilian calf leather, according to its Environmental Profit and Loss team.

The luxury label has long been a proponent of alternative materials, touting grape and fungi bags, shoes and clothing items, and releasing its first-ever banana plant bags in the new fall/winter 2023 collection. Since globally animal agriculture is reported to account for 18 percent of all greenhouse gas emissions by the Food and Agriculture Organization a fact Stella McCartney lists on its website the brand is certainly not alone in moving away from the resource-intensive industry but stands out in its vegan focus among other fashion names in its affluent sector.

Over the past few years, other luxury fashion brands have been hopping on board, putting their own leather-free products on the market.

Back in 2017, Italian fashion house Salvatore Ferragamo brought forth its first-ever apparel line made from citrus fruits ([see story](#)). A year later, German fashion brand Hugo Boss debuted Piatex footwear made from pineapple leaves ([see story](#)).

A recent study from global fashion shopping platform Lyst found that searches for mushroom-based materials specifically were up 38 percent in 2021 compared to the year before, while pageviews for vegan leather climbed a whopping 178 percent ([see story](#)). The resource is used by both French fashion and leather goods house Hermès and the aforementioned Stella McCartney label.

The fashion industry cuts down 300 million trees annually. Since 2016, we've partnered with [@CanopyPlanet](#) to ensure we're a zero-deforestation brand. [#StellaMcCartney](#)  
[pic.twitter.com/D0EIKTIJBP](https://pic.twitter.com/D0EIKTIJBP)

Stella McCartney (@StellaMcCartney) [July 10, 2023](#)

This momentum continues.

For Italian fashion label Gucci's 100th anniversary, the company introduced Demetra, a waste-free, plant-based polyurethane comprised of GMO-free wheat, corn, plant-based viscose and wood pulp ([see story](#)). Though animal rights group PETA protested the luxury fashion company's use of exotic skins in 2022, the brand continues to experiment with efforts such as Gucci Off The Grid, a circular line.

Inventive companies are popping up to assist high-end labels with feats such as this, pushing the envelope with raw materials-based and climate-friendly leathers.

Just last month, U.S. biomaterials maker Uncaged Innovations secured \$2 million in pre-seed funding from investors, including InMotion Ventures, British automaker Jaguar Land Rover's investment arm. Eyeing the vehicle brand's sector, the newcomer creates luxury leather alternatives.

Leaders in luxury are making moves to get involved on the ground level and are taking up head roles within biotechnology.

Patrick Thomas, the former CEO of Hermès, is also a board member at MycoWorks, a fungi leather producer. The company's product Fine Mycelium is now nearly a household name among vegan luxury fans, its affiliation with big names such as Hermès only adding to its climbing fame.

*The ex-CEO of Hermès places raw materials at the heart of luxury's future*

In June, Mr. Thomas appeared on a MycoWorks podcast episode, getting into the details of why he believes in the fungi-derived material and his thoughts on modern excellence in luxury. The former fashion executive stated that today, sustainability is the key to the sector.

The company is celebrating its 10-year anniversary, announcing three new Reishi materials today, July 20th. Like all its products, these mushroom leathers are specifically tailored for luxury use and are hailed for their similarity to animal leathers.

Mr. Thomas credits this level of quality to MycoWorks' longevity and innovative applications of knowledge.

"Heritage-level quality can only be achieved with long-term dedication to discovery, paired with a commitment to

craft and the transmission of deep expertise," said Mr. Thomas, in a statement.

"MycoWorks' Fine Mycelium platform is built on these principles, bringing together artisanal mastery with a rigorous approach to material innovation in a scalable way."

#### Actionable ambitions

Danish ready-to-wear clothing brand Ganni the very first singular brand that luxury resale platform Vestiaire Collective has ever partnered with ([see story](#)) showcased a blazer made from Celium from June 27, 2023, to July 1 at its Copenhagen flagship.

The bacterial material is a leather alternative. Developed by Polybion, Celium is made from agro-industrial fruit waste, adding to the lineup of raw-based options for luxury brands steering away from animal leathers.

The strong and lightweight invention brings unique breathability to the products it comprises, as celebrated during the Global Fashion Summit in the Danish city.

The Global Fashion Summit returns to its roots in Copenhagen, this time with an even greater emphasis on sparking tangible action under the theme 'Ambition to Action'!

27 - 28 June 2023

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Secure your tickets here: <https://t.co/kQm1ovBhAh> [pic.twitter.com/ENq2mKHxiw](https://pic.twitter.com/ENq2mKHxiw)

— Global Fashion Agenda (@GFAgenda) February 9, 2023

The international event's 2023 theme was "Ambition to Action," and had a heavy focus on topics such as the possibilities of alternative materials. Presented by net positive fashion nonprofit Global Fashion Agenda, the Summit was presented by the environmentally focused entity with support from its patron, The Crown Princess of Denmark.

As both business and governmental leaders alike push for the transformation of the fashion industry, time will tell which luxury brands proactively step into the future.