

Fabric headlines

TEXT: SOPHIE BRAMEL

1. Denim

Biodegradability is an end-of-life solution that the cotton-based denim industry, including Adriano Goldschmied himself, readily embraces. This family of products continues to expand with Calik introducing a new range at Kingpins in Amsterdam, adding to Candiani's natural rubber stretch yarn Coreva and Desert Studio's experimental range last year.

CALIK INTRODUCES BIODEGRADABLE DENIMS

The latest innovation to come out of the research lab of Turkey-based mill Calik Denim is a special technology that allows a fabric to biodegrade in 210 days, thus its name B210. The process can be applied to all the mill's denims, whatever their composition, including stretch qualities, the company says. "In tests, B210 fabrics have been found to disintegrate in soil by 99.38% in 210 days," says senior marketing executive Selen Ergul. Calik developed this new technology in part to address the issue of fibre fragmentation and microplastics. Textiles are said to be the source of 35% of microplastics in nature according to a 2017 report by the International Union for Conservation of Nature (IUCN). Products made in Calik Denim's new B210 should thus disintegrate and disappear in less than a year.

CANDIANI'S COREVA BOOSTS SOIL HEALTH

In a partnership with the Rodale Institute, a regenerative agriculture research organisation, Italian denim mill Candiani can confirm that its natural rubber-based stretch yarn Coreva contributes to soil health. "Coreva is not only biodegradable and compostable, but the rubber possesses phytonutrients that make it suitable for use as organic fertiliser," says company president

Alberto Candiani. An experiment, conducted in California, used the innovative fibre to fertilise soil and grow regenerative Blue Seed cotton, the mill's exclusive hybrid, non-GMO variety of cotton that is said to require less water and chemicals inputs. Scaling up the use of the innovative natural stretch fibre has been slower than planned, it is present in about 5% of the mill's production. But the head of Candiani does expect to bring it up

to 20% in the next five years. He also plans to launch a Coreva consumer-facing brand to support its market reach this year.

MASTERFUL MILLINERY BY STEPHEN JONES FOR G-STAR

British milliner Stephen Jones has applied his design wizardry to a G-Star denim fabric in a capsule collection launched last fall. The designer reworked earlier couture creations in supersized proportions that are adorned with multiple graphic seaming. The collection also features two popular streetwear staples, a bucket hat and baseball cap. "Everybody around the world knows what denim is and what denim signifies. I took denim out of its comfort zone and made it what it wasn't. G-Star gave me complete carte blanche," says Stephen Jones. The fabric he chose is G-Star's Kir Denim Organic 2.0, the third edition of a cradle-to-cradle Gold-certified denim fabric first launched in 2018.

NO44 CLOSES THE DENIM LOOP

Romanian denim label No44 is seeking to scale up circularity in jeans in a new range that features an R-Two fabric supplied by Turkish denim mill Isko. These are made from a blend of post-industrial and post-consumer cotton fibres. To fully close the loop, No44 has set up a takeback programme, rewarding consumers who return jeans they no longer wear with a



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discount on the purchase of a new product. "When we started No44, prolonging the life of a garment was the first step we took towards sustainability. Sustainability is the future, and we are ready to take the lead and commit to meaningful change," says No44 marketing manager Claudiu Ciubotaru.



B210 BY CALIK DENIM

B210
FUTURE TO NATURE
BIODEGRADABLE



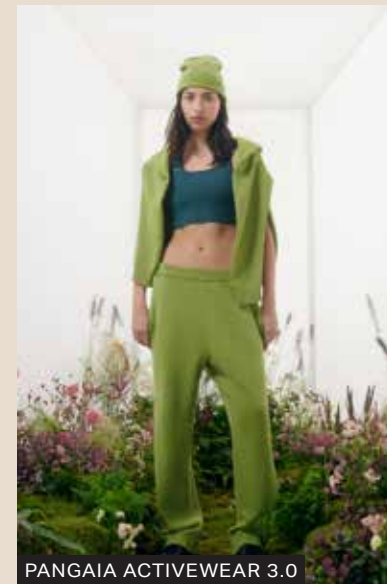
STEPHEN JONES FOR G-STAR - THE WINGED BASEBALL CAP

2. Athleisure

Athleisure remains a strong product category, driven in part by the dynamics of innovation at work among its key suppliers and brands. New products focus on creativity, functionality and/or sustainability in their quest to maintain the versatility and popularity of everyday performance wear.

PLANT-BASED PERFORMANCE BY PANGAIA

In its new Activewear 3.0 collection, British ecobrand Pangaia continues to support innovation in its quest to combine the best of sustainability and performance. The new range features



PANGAIA ACTIVEWEAR 3.0

a fabric made from Fulgar's Evo bio-based polyamide yarn and Hyosung's new Creora elastane, which is 30% bio-sourced. Italian nylon producer Fulgar makes its Evo yarns from castor bean plants that grow in arid regions not suitable for food crops. These two fibres enable Pangaia to further its 'high-tech naturalism' agenda. "The activewear sector generally uses materials with entirely petrochemical origins. However, the introduction of a greater number of bio-based materials means we've been able to replace fossil fuels with renewable resources. This is the choice we've made for Pangaia's Activewear 3.0 collection," says Amanda Parkes, Pangaia's chief innovation officer.

ZERO-WASTE LAYERING

Two Italian mills, Eurojersey and Cifra, have teamed up to create a new beachwear concept based on Eurojersey's patented Sensitive warp-knitted fabrics and Cifra's Warp Knit Seamless (WKS) technology. The two partners have focused on the



EUROJERSEY X CIFRA

layering possibilities of the two textiles to add depth and two-dimensionality to a garment. The 'High-tech Crochet' concept can thus feature variations on opacity and transparency along with plays with contrasting colours. Fabrics can also be engineered to offer differentiated body-mapping zones delivering targeted performance. "We wanted to create something truly new in a segment, that

of swimwear, which increasingly demands fashion and function, and which often offers collections that are not very creative and not very functional," says Cifra CEO Cesare Citterio. He also points out that WKS technology eliminates processing waste by roughly 30% compared to traditional cut & sew knits.

LYCRA NATURALFX BOOSTS LONGEVITY

As part of their ongoing efforts to bring more innovative and sustainable textile technologies to consumers worldwide, The Lycra Company and Swiss performance finishing specialist HeiQ have teamed up to introduce Lycra naturalFX Technology. A textile treatment for cotton knitwear, it is said to prolong the lifespan of this category of clothing while delivering superior fit, comfort stretch and a soft hand feel. "Lycra naturalFX technology enhances the stretch and recovery properties of cotton knit fabrics and does so in a durable way with an outstandingly soft hand," says Nicolas Banyols, chief commercial officer at The Lycra Company. "It not only improves the performance of everyday 100% cotton knitwear but is also easy for mills to implement as it requires no investment in new equipment."

SENSITIVE® FABRICS FEATURE NOVEL HIGH-TECH EFFECTS

Italian mill Eurojersey has expanded its offering of innovative finishings applied to Sensitive fabrics in its newly launched Synergy collection. The patented warp-knit textile construction offers three-dimensional elasticity, and its super flat surface endows it with a good level of abrasion resistance. Among the new finishes, Eurojersey's Eco Pigment Printing technology creates three-dimensional micro geometric embossed prints. The high resolution of today's digital printers makes it possible to achieve genuine 3D optical illusions on a Sensitive fabric ground. The Punch Out laser-etched micro-perforation technique creates an engraved effect on the fabrics. Finally, embossing, which uses heat and pressure to modify a textile's surface, creates a true three-dimensional pattern. Eurojersey points out that these special effects can be chosen to offer novel aesthetics or advanced functional features for activewear.



PUNCH OUT SENSITIVE® FABRICS BY EUROJERSEY

3. Thermal insulation

Air being the best insulator, textiles seeking to offer protection from the cold have one main solution to draw on, namely trap air in their structure. This can be achieved by choosing hollow core fibres or the tangled fibres of a nonwoven padding. Down though remains the gold standard. Proponents of the natural material are introducing new finishes to improve its ability to manage moisture, its one weak point. Others are exploring novel natural fibres that the hegemony of synthetics made obsolete.

THERMOLITE EVERYDAY OFFERS WARMTH WITHOUT WEIGHT

The Lycra Company has expanded the reach of its Thermolite polyester technology to the sock category with a new concept called Thermolite Everyday Warmth. It is designed to trap the



THE LYCRA COMPANY'S THERMOLITE® EVERYDAY WARMTH TECHNOLOGY

wearer's body heat and store it in the fibre's hollow core, thus providing warmth without weight. Using a proprietary, standardised measurement technique, The Lycra Company has established specific values that quantify the level of warmth

needed for socks. "We are laser-focused on producing high-quality fibres that deliver lasting performance," says Jane Gwyther, European sales manager for legwear at The Lycra Company. "As the temperatures drop and people lower their thermostats to save energy, socks that help keep feet warm will become a critical component of daily attire. The launch of Thermolite Everyday Warmth technology for socks also enables brands to differentiate their products."

ENHANCING THE PROPERTIES OF NATURAL DOWN

Swedish outdoor brand Haglöfs has a long tradition of meeting the demands of outdoor enthusiasts with advanced insulation technologies, and this winter is no exception. The newest addition to the range is H Down, where H stands for hydrophobic. Natural down delivers unrivalled performance in many ways, the brand says, but untreated feathers are

sensitive to humidity, which affects its ability to insulate and weighs it down. Haglöfs has addressed this issue by applying a fluorocarbon-free DWR treatment which increases its resistance to water. In the synthetic category, the brand continues to develop is graphene-boosted polyester insulation known as Mimic.

FLUFF STUFF, AN ALTERNATIVE NATURAL INSULATION

Finnish start-up Fluff Stuff believes it has identified a new natural thermal insulation material that could be considered carbon negative for its ability to restore peatland ecosystems. Presented as an alternative to synthetic or animal-based insulations, it is made from cattail fluff, a material that was used as a textile filler in Finland until the mid 20th century when the development of cheap synthetics brought an end to the practice. Lukas Schuck and Tea Auramo, the two company cofounders, postulate that the plant, which grows in wetlands, could help restore peat bogs that emit high levels of CO₂ and could thus reduce Finland's emissions. They are currently working on developing a system to automate harvesting and are pursuing research into the material's thermal properties. Though cattail fluff is similar to down for its soft hand and elastic ability to resume its shape, it does not match natural down's fill power. This is yet another area that the start-up is working on.

FUZE TECHNOLOGY BOOSTS DOWN'S PROPERTIES

US-based Allied Feather & Down introduced a new, fast-drying gold nanotech-based down solution last year with Fuze Technology. The innovative concept is now coming to market thanks to Artillect, an outdoor brand based in Boulder, Colorado, and German outdoor brand Jack Wolfskin. Fuze's gold nanoparticles when applied to down clusters increase the evaporation rate of water at a molecular level, without the need for heat. It differs from water-resistant finishes that keep down clusters drier for longer, but do not accelerate drying, the company says. Allied's ExpeDRY-treated down is said to dry nearly twice as fast as DWR-treated down.



ARTILLECT DIVIDE FUSION STRETCH HOODIE

4. Performance fabrics

Increased use of recycled yarns remains one of the more prominent sustainability strategies among makers of fabrics for performance sportswear. Some companies are going one step further by investing in improving the efficiency of their own facilities or in building up the supply chain for recycling.

PERTEX TEAMS UP WITH AMBERCYCLE

Pertex, a reputed performance fabric brand, has quietly introduced Cycora, a recycled polyester yarn made by Ambercycle. The Los Angeles-based start-up has developed a technology that ‘regenerates’ fibres at a molecular level to



PERTEX SHIELD REVOLVE

produce synthetics that match the quality of conventional fossil-fuel based synthetics. Pertex, an organisation that sources its fabrics from various high-end weavers, has been progressively

switching to more sustainable fibres. It has developed a series of monomaterial laminates designed to facilitate end-of-life recycling. “We are constantly striving for new ways in which to reduce our environmental impact,” says Pertex brand director Steve Laycock. “This partnership with Ambercycle offers new opportunities to achieve these goals. For example, our Pertex Revolve fabrics are monomaterial, made entirely from recycled polyester. Currently this polyester is from PET bottles, but the partnership with Ambercycle carves a pathway for a new truly circular fabric made through textile-to-textile regeneration.” In 2022, Ambercycle says it processed some 1.1 million kilogrammes of post-consumer and post-industrial textile waste collected from aggregators and garment manufacturers across the US and Central and South America.

GORE INTRODUCES LAMINATES MADE FROM OCEAN-BOUND PLASTICS

In its ongoing collaboration with Bionic, a Newark, Delaware-based company specialising in collecting and recycling coastal and marine plastic into new fibres, Gore has announced that it is introducing two new two-layer Gore-Tex laminates that



SITIP

feature Bionic textiles made from coastal plastic waste recovered and sorted by its facility in Cóbano, Costa Rica. Outdoor brand Patagonia will be the first to feature the waterproof-

breathable laminates in its A/W23/24 ranges. The membrane technology is Gore’s new ePE (polyethylene) film, as a substitute for its legacy fluorocarbon-based ePTFE membrane. W.L. Gore’s contribution to Bionic’s activities include funding and supply chain expertise to assist Bionic in scaling up its collecting and recycling infrastructure in Costa Rica. These cover recycling stations along roads and beaches and the creation of a centralised sorting, bailing, and flaking facility for local businesses, schools and institutions.

SITIP PUBLISHES ITS FIRST SUSTAINABILITY REPORT

Italian high-tech knit fabric manufacturer, an official supplier to the Giro d’Italia since 2014, has released its first sustainability report which outlines the efforts the company based in Cene, near Bergamo, is making towards reducing its impacts. These include the installation of a cogeneration plant, the reduction of the use of virgin raw materials and the transition to an energy efficient lighting system. On a broader scale, it has also led to improvements in the layout and logistics of the company’s production facilities. With regards to its products, Sitip has stepped up its range of ‘Native’ eco-materials that are made from GRS-certified recycled yarns. Among its projects for 2023, the knitter intends to achieve ISO 14064 carbon footprint certification and begin work on a new wastewater management plant.

NEW RESPIGARD MEMBRANE POWERS ECOSENSOR FABRICS

Asahi Kasei Advance, the sustainable performance fabrics division of the Japanese textile conglomerate, has developed 47 new references in its Ecosensor ranges for FW 24-25. This season, the collection features a new polypropylene membrane, RespiGard, made by Polypore, also an Asahi Kasei company. The patented microporous and hydrophobic membrane is produced using a solvent- and PFC-free manufacturing process. True to its sustainable ethos, Ecosensor’s stretch



KNITTED FABRIC BY ECOSENSOR™

fabrics, which represent 35% of the collection, are made from Asahi Kasei’s recycled elastane Roica EF. Other highlights of the new range include a three-layer woven fabric made from a GRS-certified polyamide that has a velvety touch and high wind and water resistance. Recycled polyester and Solotex, a partially biobased yarn made by Teijin, are present in several knit references.