

CREAM OF THE CROP

Sisal: the green gold of design



The legend establishes Henequén (*Agave fourcroydes*) as a sacred plant of the Mayans, whose goodness and use were discovered by Zamná, a Mayan priest, founder, and inhabitant of Chichén Itzá and who taught his people how to benefit from the use of the native plant. Over 1,400 years ago, the Mayans discovered Agave, the genus of the some 200 species, native to Yucatán, Mexico. By crushing the leaves, they extracted a robust white fibre that could be used for everyday items. Sisal was thus cultivated in the patios of the houses of the Mayans and used since pre-Columbian times to create rigging, cords, sacks, bags, hammocks, and other beneficial domestic and utilitarian items.

The sisal industry transformed domestic production into a global agribusiness, mechanising every stage from the cultivation of the plant for its fibre to the processing of the highly resistant fibre into the perfect packaging worldwide. Until the middle of the 20th century, shipping and agriculture relied heavily on sisal for moorings and bailer twine throughout the northern hemisphere. Until demand eventually dwindled due to the invention of synthetic fibres after the Second World War.

Large-scale sisal agribusiness began in Yucatán in approximately 1850, driven by abundant inexpensive labour of the rigorously subjugated Mayan population and the development of machinery during the industrial revolution that facilitated the defibration process. The development of agricultural machinery allowed the intensive use of sisal in its most successful application. Thus, the export of sisal from Yucatán worldwide was the basis of the economic boom in the region at the end of the 19th and beginning of the 20th centuries. This bonanza created immense fortunes, evidenced in the haciendas that have become luxury hotels.

Centuries later, the *Sansevieria*, (*Dracaena trifasciata*) plant was introduced to Yucatán from Africa; its fibres were found to be softer and finer than sisal, although both fibres are elastic, strong, and luminous. The natural characteristic of sisal and *sansevieria* fibre is that no fibre is the same, which created its aesthetic beauty. Sisal and *Sansevieria* fibres are still woven on a backstrap loom: they are spun by hand with the help of a bicycle wheel, a modern version of the spinning wheel. Both plants are still a significant local economic resource for rural communities in the Yucatán Peninsula. They are also environmentally sustainable, renewable, and thrive without fertilisers, herbicides, and irrigation.

Certain steroidal chemical substances such as hecogenin and tigogenin, precursors in cortisone's chemical synthesis and used in the pharmaceutical industry to manufacture the contraceptive pill, are also extracted from the juice, (sumo). Mezcal the liquor is obtained from agave in an industrialised process is perhaps the most well know products of the agave plant, but there is some confusion between mezcal and tequila: all tequila is mezcal but not all mezcal is tequila.

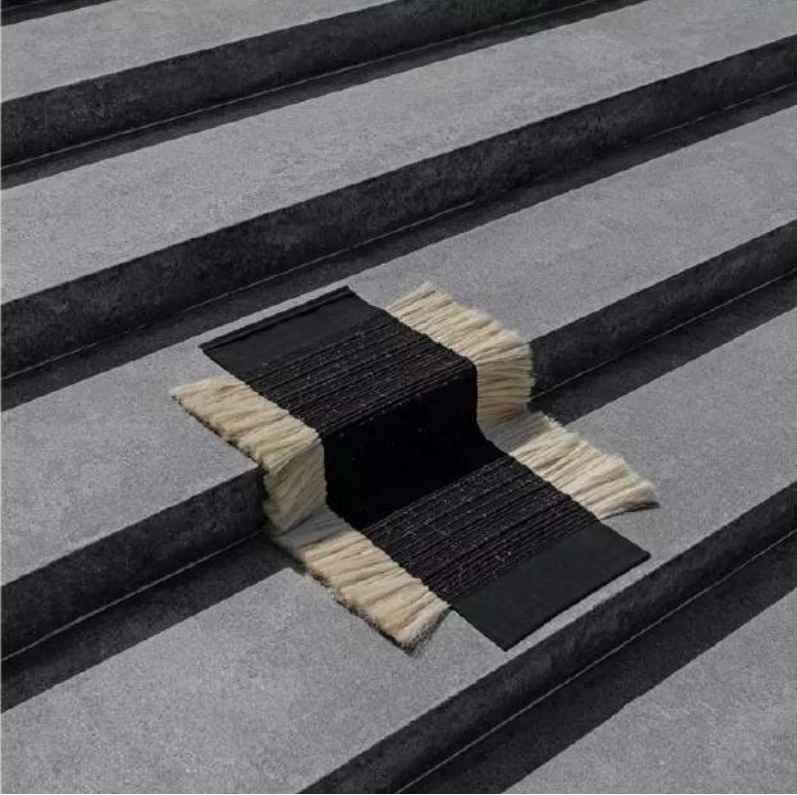
Mezcal is a vast category of spirits made from agave and tequila is a small subset of mezcal, much like bourbon is a kind of whiskey.

Today, thanks to the work of designers such as Angela Damman, Emma Boomkamp, Fernando Laposse, and Trine Ellitsgaard, among others, these fibres are once again relevant. Trine Ellitsgaard, the widow of Francisco Toledo, the Mexican Zapotec painter, started looking for local materials for her carpets and found sisal in Yucatán. "I made rugs from sisal for many years, a kind of agave," she says. "I knew a man who spun it in Campeche, but finding it was getting harder and harder. When he was young, all of Campeche was covered with sisal, but now there is none. When the sisal industry declined in Yucatán, the plants also died, so little by little the tradition of spinning was lost, and now few artisans know how to do it." Later, when the mezcal boom occurred in Oaxaca, Maguey (*Agave Asparagaceae*) was grown even at the top of the mountains, the artist became curious to know what they did with the waste. She noticed that many maguey leaves were cut to produce more and more mezcal, but they were thrown away without anyone using them.

"Together with friends, we began to talk about how it was a pity that it was not used to obtain the fibre," Ellitsgaard says. "We began investigating what they did in Yucatán with sisal, and the textile designer Angela Damman, found a machine to extract the fibre. I bought the machine, and we installed it in Soledad Salinas, a small town famed for mezcal production to see the different species of agave and verify how the fibre came out. It was then that we worked with the members of the Hermano Maguey project since they were the ones who extracted the fibre." The product of years of observation, experimentation, and innovation is now shared between Ellitsgaard and Damman's work.

"Each rug needs many hands; people who harvest the fibre, someone who transports it, then in Tlacolula they spin and dye it, then we weave it. It is a process in which many people participate," explains the artist. Ellitsgaard refers to other creators who use this fibre in art, such as Angela Damman, but it is only recently that artists have begun to use it: "She remembers that process of extracting the sisal in Oaxaca took about 12 days, and the fibre they obtained was really for use to make ropes and bags where they kept their seeds and used them in the field. Some people knew how to spin this type of fibre, but this tradition died when plastic arrived because it was cheaper and did not rot when wet." Ellitsgaard shares that during her research, it was not easy to find someone in Oaxaca who could spin the fibre. Due to her interest in textiles, she began to weave and discovered the fibres versatility. "We are making paper and boxes," she says. "In fact, I've been working with someone who's been using it for packaging for a while, and when we started getting the yarn, we made the rugs." Of Dutch and Mexican origins, Boomkamp lives in Mexico City. "For me, México means infinite possibilities. It allows ▶







things on a non-industrial scale, allowing for exploration of shapes and materials in interesting ways," she says. "I was surprised with sisal because it absorbs colour well and has a beautiful soft shine. So that's how I became enchanted with henequen (sisal). I also like the colour itself; gold seems very warm to me. So between that tone and the brightness it has, I found it to be a very attractive material. In addition, I had made a trip to Yucatán and on a visit to an agave henequen hacienda I had bought a giant bale of sisal so I had a lot of material to work with. I also found it interesting to approach henequén because of its controversial history and, at the same time, because it has always been used as a 'utilitarian' material for ropes or sacks, but without exploring its beauty. I was attracted to working with a known material for its history and resistance but unknown in its most aesthetic version."

Angela Damman established herself and her family in Yucatán in 2011. She is now deeply committed to Mexico and to her business rooted in sustainable cultivation and traditional processes. Since the beginning, her vision has been to cultivate the plants, design, and make everything in house. Today she runs a design atelier where she makes everything from a dramatic chandelier to a functional clutch as well as carpets and pillows. The entire process happens within a 50-mile radius of her home in Yucatán. She is an astute designer

stretching the materials to their limits. The Brujar bucket bag, for example, is made with spun sansevieria fibre and has up to 1500 fringes. Damman continues her practice as an artist, producing textile sculptures and bespoke objects made using henequén and sansevieria fibres. The more experimental work shows the infinite possibilities of these untapped natural fibres.

Fernando Laposse, who collaborates with Angela Damman, explains that the fact that henequen requires virtually no water appealed to him from an environmental perspective. "Also, the agave henequén plant can be harvested in five years," he says. "Once harvested, its core is used to make everything from agave syrup to tequila or mezcal, and its leaves can be crushed to make the fibres, so nothing is wasted."

He continues, "There are many solutions to be found by looking back to the historical use of materials. With my sisal furniture and installations, I try to present sisal in its raw form and to show people how simple it is to go from plant to product. For this I do the whole process myself, from harvesting the plants to processing the fibres, combing and knotting them by hand to make hairy furniture, and installations. I doubt that the sisal industry will regain its previous glory. However, with my pieces, I try to adapt and reinterpret how indigenous communities still use it in Mexico." *** **Marcella Echavarría**

Foto: Molina

Image above and above left: Sansevieria, (*Dracaena Trifasciata*).

Image Far left : Isabel Infante, rug.

Image left: Emma Boomkamp, rug.

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