

VEGETABLE-TANNED LEATHER

It was already known in ancient times that treating hides with vegetable extracts would render them rot-resistant and allow them to be used for other purposes. In the 4th Century BC, the Sumerians, who wore mainly hides and pelts, described their tanning methods on clay tablets to pass their knowledge on to future generations. Six thousand years later, this same procedure is still being used and is appreciated for its natural ingredients and the beauty of the leather it produces.



@Fortier Beaulieu

Leather that stands the test of time

The principles of vegetable tanning have not changed since ancient times, still using the tanning properties of plant materials, mainly extracted from trees: oak, chestnut and mimosa, as well as quebracho and tara from Latin America. But whereas once the skins were hung to macerate in vats in direct contact with the bark, roots, berries and leaves for lengthy periods of time (up to 18 months or even two years), now concentrated extracts are used. These have optimal tanning capacity and have allowed maceration times to be considerably reduced.

In addition, the use of drumming not only makes the tanning more even, it also reduces the time required, as the mechanical action facilitates the penetration of the tannins into the skin fibres. Consequently, the duration of the vegetable tanning process now tends to be between 48 and 72 hours. *"The use of hot water has also allowed us to shorten tanning times,"*

adds our correspondent from the **Jullien** tannery. However, the traditional vat-tanning procedure is still used to produce very thick and strongly rub-resistant leathers by companies such as the Belgian tannery **Masure**, which specialises in producing leather for soles from bovine butt hides.

The skins are immersed in a series of five to eight vats containing increasing concentrations of tanning solutions. They spend between 15 to 30 days in each vat, meaning that the complete tanning process can take three to eight months, according to the desired result. However, *"with concentrated tannin extracts and drum tanning as a complement, we can reduce the tanning time to one month,"* explains Philippe Alfonsi, managing director of the **Fortier Beaulieu** tannery. Once the hides have been tanned they are dried, preferably in the open air rather than in a tunnel, which further extends the production time but improves quality.

Hard-earned qualities

For vegetable leather, as is often the case with life in general, patience brings its rewards. When the vegetable-tanned leather has not been given a final finish that modifies its surface, it boasts a roundness and sensuality to the touch that delights real leather lovers. In addition, as it absorbs humidity better than other types of leather, it is particularly suitable for being in direct contact with the skin. The tanning agents give it a natural beige colour, with different plants giving different shades. Vegetable-tanned leather also takes some of the strength from the wood used to tan it, giving it good rub- and stretch-resistance. However, one downside of this natural dye is

that the leather cannot be given a white or pastel colour unless a finish is applied to the surface. Furthermore it tends to darken over time, as it is light-sensitive, an inconvenience that the defenders of this noble leather seek to play down by focusing on the famous patina that it develops as it ages. It is also sensitive to heat, which causes it to shrink or even to become breakable above 70°C. But once again, its fans come to its defence by emphasising that, like all noble materials, it requires care and attention. And this ancestral and 100% natural tanning procedure is nicely in tune with the ecological concerns of today.



@ Arnal

Uses and applications

Vegetable-tanned leather is strong and resistant and was used in industry for mechanical parts such as belts that were subject to great duress. Saddlery is also a very ancient application, as are the outer soles of shoes, which remains one of the emblematic outlets for vegetable leather in the luxury sector. But footwear interiors also benefit from its capacity to absorb humidity and it is often used for linings and inlay soles. Thanks to its strength and its suitability for contact with human skin, it is also recommended for orthopaedic items. These are often

manufactured by moulding, a technique which is unsuitable for its chrome- or synthetic-tanned competitors. Similarly, it is used for upholstery where its patina is considered to be a sign of nobility and naturalness. But it is also benefiting from the boom in leather goods production thanks to the progress made by drum tanning, which makes it suppler and easier to handle. Handbags in particular are currently an important outlet for vegetable-tanned leather, where it can be used as the outer or inner material.

A specialist leather

Vegetable tanning can be used on all species of hide, but the technique requires very sound experience and expertise and is often the preserve of specialists who are entirely dedicated to the production of vegetable-tanned leather. Each has their own recipes, their own tricks and secrets that confer specific characteristics onto their articles.

Fortier Beaulieu

The French vegetable-tanned bovine leather specialist since 1840, **Fortier Beaulieu** produced primarily industrial leather until the 1980s. Today the company mainly supplies the luxury leather goods sector, where it works mostly with side leather, the name for the half skins that lie on either side of the backbone. *"This format is the most suitable for leather goods and drum tanning, which is the method we use,"* explains the managing director, Philippe Alfonsi. *"We offer very natural articles for the luxury sector but also a range of finishes that correspond to fashion trends and offer greater protection and resistance to usage."* Positioned on the premium market, Fortier Beaulieu selects top quality bull and young cow hides from France, Spain and southern Germany and prefers animals bred for their meat, whose skins are "more resistant and tauter" than the dairy breeds.



For its large thick skins, destined for use as leather soles, the Belgian tannery Masure still tans in vats.



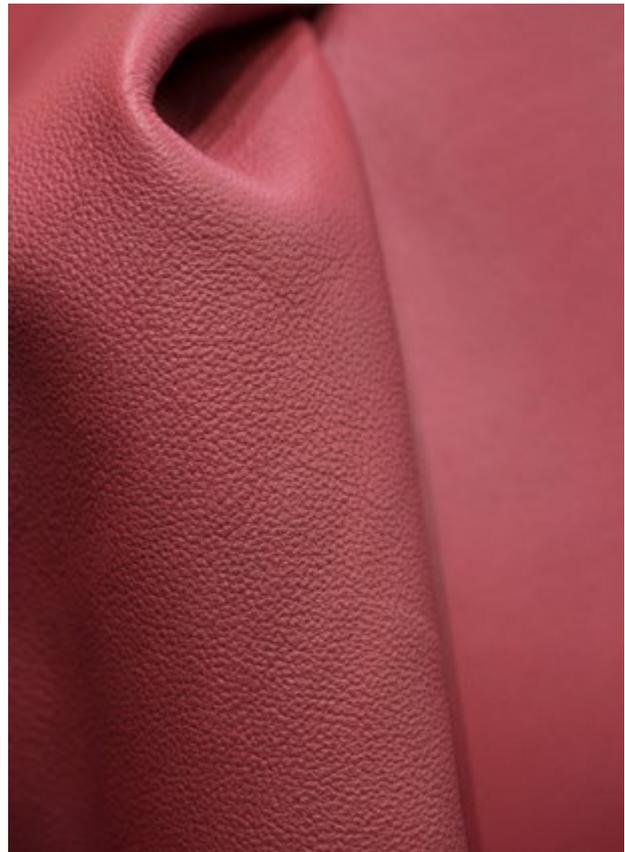
Vegetable tanning naturally gives a beige colour to vegetable leather. Samples from Fortier Beaulieu.

Masure

Recently purchased by Fortier Beaulieu, the **Belgian tannery Masure** has been a global reference in butt and shoulder leather for soles since 1873. "Bringing these two companies together gives us a more complete position in the vegetable leather market," explains Philippe Alfonsi. "In total, we produce 600 to 700 000 m² per year." For its large skins, Masure still uses the vat-based tanning method with additional time in the drum. The soles are generally made using butt leather. Leather goods items and belts are made from butt leather but also from shoulder leather, which has a very specific appearance and strength.

Arnal

Another French specialist of vegetable-tanned bovine leather, **Arnal** also boasts a very wide and diverse range of products. Its output of around 15,000 hides per year can be divided between calf (10%), cow (20%) and bull (70%), all carefully chosen from French herds. Thanks to the multiple features of its industrial equipment and its wide-ranging expertise, the company can target a number of markets, with articles that are very firm but also items that have been softened by retanning, nourishing and mechanical actions. They vary in width from 1.2 mm for leather goods linings to 5.5 mm for soles, saddlery and strap making. Turnover can be broken down into 40% leather goods, 30% footwear, 30% saddlery and 10% niche markets, which illustrates this diversity.



Vegetable-tanned leather is light-sensitive and is better suited to warm shades. Sample from the Arnal tannery.



The Italian tannery Tempesti is a major player in bovine vegetable-tanned leather.

Tempesti

The **Italian tannery Tempesti** can boast of its experience in bovine vegetable leather. Since 1946, it has been constantly perfecting its techniques and improving its articles. *“Everything is done in drums, from the tanning to the dyeing and the nourishment with fish or mineral oils. At different stages of course. This allows the products to penetrate more deeply into the leather and therefore to have a longer-lasting effect. As a result, our leathers are more supple and shiny and they age better. For example, thanks to the oils that are intimately linked to the collagen fibres of the leather, superficial wrinkles fade more easily and water penetrates less quickly,”* explains our correspondent at the tannery. In order to handle the skins more easily, Tempesti divides them into three categories: shoulder leather, which it recommends for bags, and two half-butts that it offers mostly for shoes. Its flexible and reactive service, without a minimum order, is also one of the key assets of this essential player in the vegetable-tanned leather market.

Miret

The Spanish tannery, Miret, is also a member of the very select group of suppliers of luxury vegetable-tanned leather. Located in Igualada, the Spanish capital for premium leather, this company can boast more than half a century of expertise in bovine vegetable-tanned leather. This has not stopped it from investing massively in recent years to modernise its process and its equipment in order to meet the standards of the big-name houses. Consequently its tanning process, which uses quebracho, mimosa or chestnut and lasts some 25 days, working with raw hides from some of the best European sources, is subject to constant monitoring to ensure that nothing can happen that would alter the quality of the leather. *"We offer a palette of natural shades, according to the tannin that is used, or we can dye to order in drums and create bespoke finishes. Thicknesses can vary from 1 to 5 mm. The outlets for our leather include leather goods (50%), saddlery (30%) and luggage and belt-making (20%),"* explains Jaume Valls, the export director.



Final inspection for the classification of skins at the Spanish tannery, Miret.

Jullien

Vegetable tanning is not only reserved for large hides. Goat leather is also very suitable for this method, as Indians have known for a very long time, exporting large volumes of tanned goat leather. Firm and easy to cut, these skins are also hypoallergenic, all of which are advantages in the production of leather goods, small leather goods and orthopaedic products. This leather is used to line jewellery boxes or canteens of cutlery, as it stops silver from oxidising. A pure player in the production of goat leather, the **Jullien** tannery is also very experienced in vegetable tanning. *"We re-tan all the hides we receive from India, using oak, chestnut and mimosa extracts. By doing so we neutralise the initial tanning and then better manage the dyeing process,"* explains one of the managers. The skins are humidified, washed, tanned in drums for three to five hours, spun and then dried in the open air to then be used either damp or dry. *"Our goat leather is very much in demand for footwear, where it removes all risk of allergy, but also for leather goods thanks to its firm texture,"* adds our correspondent.



Goat leather is particularly well suited to vegetable tanning. Sample from the Jullien tannery.

Joqueviel et Cathala

Lamb leather also has its vegetable-tanned version. Known as Basane, this French speciality is popular with those who want natural products, for clothing, leather goods or the lining of shoes. “*Basane has a rounder texture. It holds the grain better and is more suitable for bubbling/blistering. But it is delicate to work with, does not like high temperatures or being split too thinly,*” declares Serge Cathala, with all his experience as a specialist. Tanned overnight in drums with extracts of chestnut, mimosa and quebracho, the lamb leathers, which come from France, New Zealand and Australia, are then air-dried under specific conditions: *The temperature must not exceed 30° or the skin will become breakable, and the humidity level must remain between 15 and 25%,”* explains our correspondent. It is worth making the effort to maintain this noble tradition!



Vegetable-tanned lamb leather is a French speciality known as Basane. Sample from Joqueviel et Cathala.

Vegan leather, a misnomer

How can a product that comes from an animal, like leather, be called “vegan”? Or how can a plant-based product be called “leather”? This abuse of language, which is misleading at the very least, generates confusion which needs clearing up. The dictionary definition of leather, according to Le Robert is “*animal skin that has been separated from the flesh, tanned and prepared.*” The word “leather” can therefore not be associated with the adjective “vegan” which excludes all traces of animals. This is not to be confused with the expression “vegetable leather”, a linguistic shortcut for leather tanned using vegetable tannins!

Next edition:

The Première Vision Paris show, Parc des Expositions Paris Nord Villepinte from 7-9 February 2017

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