

Overview of wool context in France and Lithuania
followed by wool master designer presentation for *Weave Up!*
project, funded by European Union
(Creative Europe programme)



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Introduction

Wool is the so-called hair that covers the skin of sheep, goats, camels, llamas and other animals. It belongs to the group of fibre of animal origin. Both in art and in industry, sheep's wool is the most popular. In 2022, global wool production reached almost 2 million tonnes, the main producers being Australia, China, New Zealand, Turkey and South Africa¹.

In 2022, Wool represents less than 1% of the world's textile fibre production, while recycled wool production, mostly concentrated in Italy, India and China, is estimated to represent 6% of the global wool market².

Characteristics

Wool fibres have a scaly surface, which accounts for wool's ability to felt. The scales and the crimp (number of bends per unit length) produce air pockets between the fibres making wool an excellent insulating material against heat and cold. Wool is hydrophilic, absorbing up to a third of its weight before feeling wet to the touch. This ability to absorb moisture prevents a build-up of static electricity, hence wool does not attract dirt and dust from the air. Wool is also more fire resistant than many other fibres. Wool fibres are very elastic, making it a much more suitable fibre for weaving textiles. All of these properties make sheep wool one of the most useful types of fibre available and it is not surprising that in ancient times it was one of the main textile materials, particularly for clothing³.

Historical and national contexts

Like linen, wool is one of the oldest fibres used by humans, with textile traces dating back to the Bronze Age Europe⁴, and clues for wool local production have been observed in the late Pre-Pottery Neolithic B in Middle Euphrate Valley⁵.

1 Textile Exchange (dir.), *Preferred Fiber & Material Market Report*, october 2022, pp. 16-41.

2 *Ibid.*, p. 10.

3 N. A. G. Johnson, E. J. Wood et al., "Wool as a Technical Fibre", in *The Journal of The Textile Institute*, 2003, No. 94, pp. 26-41.

4 Antoinette Rast-Eicher and Lise Bender Joergensen, "Sheep wool in Bronze Age and Iron Age Europe", in *Journal of Archeological Science*, February 2013, No 40, p. 1224-1241.

5 Maria Saña and Carlos Tornero, "Use of Animal Fibres during the Neolithisation in the Middle Euphrates

Textile remains show that the white sheep appeared in Europe in the Iron Age, and that primitive sheep are descended from the Soay sheep⁶, which was probably predominant until the modern improved breeds emerged. Samples show that selective breeding began at the end of the Iron Age to limit moulting and develop longer wool fibres. Fine wool, of the merinos type, seems to have been developed in the Middle East and then rapidly disseminated throughout the ancient world. The earliest evidence of fine wool, dating from the 5th century BC, comes from the Greek colony of Crimea⁷. Textile remains from the Roman period bear witness to the last transformations of fleece, while white wools became widespread during the Middle Ages⁸. In the Middle Ages, the ovine species produced fibres of very different qualities, which forced the establishment of many diversified processing and production sectors. In the 14th century, two processing sectors coexisted, one of fine and short carded and wheel-spun wool competing with the one of long, combed and spun wool. This innovation led to a qualitative leap in the diversity of the industry⁹.

Wool history in lithuania

In Lithuania, sheep have been bred since the 11th century, and in order to obtain finer and better quality wool, cross-breeding began in the 19th century¹⁰.

In Lithuania, sheep farming is an auxiliary branch of animal husbandry. With the expansion of cattle and pig farming, the number of sheep decreased (about 611,000 in 1941, 56,000 in 1991, and only 11,519 in 2001). Later, with the decline of pig farming and the rise of sheep production, due to the support of the European Union, the number of sheep increased (in 2002 there were 12,323, in 2015 - 123,909, and in 2019 there were 164,257 sheep)¹¹.

In Lithuania, the majority of sheep are Lithuanian black-headed sheep. Lithuanian black-headed sheep are a breed of semi-fine short woolled sheep. Bred in the middle of the 20th century by mixing local Lithuanian coarse sheep with woolly British Shropshires and meat German black-headed sheep. The breed was approved in 1961¹².

Spinning manufactories began to be established in the 18th century with Count A. Tyzenhaus setting up one of the first spinning mills in Grudziai (later Grodno). In the 19th century, yarn was spun in the manufactories of some estates. Most of the woolen and linen weaving companies established in the first half of the 20th century had spinning mills. In the second half of the 20th century, large spinning and weaving factories were built in Vilnius, Panevėžys, Kaunas, Alytus and Marijampole. At the end of the 20th century and the beginning of the 21st century, some of them became joint-stock companies, were modernized, and some went bankrupt. About 60,000 tons of yarn were produced in the second half of the 20th century, and 3,000 tons of yarn in 2012¹³.

Valley: An Archaeozoological Approach”, in *Paléorient*, 2012, Vol. 38, No.1/2, pp. 79-91.

6 Michael L. Ryder, “ A survey of European primitive breeds of sheep ”, in *Annales de génétique et de sélection animale*, October 1981, Vol. 13, No. 4, pp. 381-418.

7 Michael L. Ryder, “ The Evolution of the Fleece ”, in *Scientific American*, January 1987, Vol. 256, No. 1, pp.112-119.

8 Michael L. Ryder, “ Medieval Sheep and Wool Types ”, in *The Agricultural History Review*, 1984, vol. 32, No. 1, pp. 14-28.

9 Desrosiers Sophie, “ Compte rendu de Dominique Cardon, La draperie au Moyen-Âge. Essor d'une grande industrie européenne, Paris, CNRS Edition, 1999 ”, in *Bulletin Monumental*, 2001, Vol. 159, No. 4, pp. 369-370.

10 Bogdaniene Eglė Ganda, *Meninis veltinys: Tradicija ir dabartis*, Vilnius Art Academy Publishing House, Vilnius, 2010, p. 18.

11 [online] Laučiuvienė Stefanija. Lietuvos avininkystė / Visuotinė Lietuvos enciklopedija. Lietuvos avininkystė - Visuotinė lietuvių enciklopedija (vle.lt)

12 [online] Zapasnikienė Birutė. Lietuvos juodgalvės / Visuotinė Lietuvos enciklopedija. Lietuvos juodgalvės - Visuotinė lietuvių enciklopedija (vle.lt)

13 [online] Ragaišienė Audronė. Verpimas / Visuotinė Lietuvos enciklopedija. verpimas - Visuotinė lietuvių enciklopedija (vle.lt)



The most common traditional type of textile in Lithuania was weaving. However, in addition to weaving, hats and shoes (felt boots) were also spun, as well as milo (thick woolen fabric). Archaeologists found fragments of a thick 9-12 century woven and felt milo. This allows us to say that felting is also a part of traditional Lithuanian textiles. Lithuanian ethnographic examples of felt - mostly functional, intended for domestic rather than aesthetic needs from 16th and 17th century were found¹⁴.

Wool Industry in Lithuania

Since 1991 the association of Lithuanian clothing and textile companies (LATIA) operates in Lithuania. It is a business association that aims to strengthen the market, expand exports, and create the most favourable conditions for association members to develop their activities. LATIA unites more than 100 members (textiles, home textiles, knitwear, clothing, sewing, leather and furs, footwear, trading companies and educational institutions). Since 2015, LATIA has been an active member of the European Clothing and Textile Organization (EURATEX).

In this association we can find some Lithuanian wool factories such as Plungės vilna which is specialised in wool carding and spinning. Danspin established in Lithuania since 2002 and which is Europe's leading supplier of woolen yarn for carpet industry in accommodation and residential sectors. Attentive to the wool issues, the factory has Green Energy certificate and the circular economy "Cradle to Cradle" certificate. The Pakaita enterprise started in 1945 and acquired knitting machines from 1953. The factory works with all kinds of fibre such as wool, especially merinos wool, linen, cotton, experimental or recycled fibre. Barker Textiles, established in Kaunas from 2001, has a long tradition of natural wool. Finally, Omnitekšas in Kaunas is a knitting company using organic wool, merinos wool and other fibres and started in 1928.

Wool history in France

The French medieval industry disappeared in the middle of the 14th century to the benefit of Dutch, Belgian and English imports. After the Hundred Years' War, the industry started up again and reached its peak during the 16th century, with Rouen and the Berry region being the main production areas¹⁵.

In the 18th century, the wool industry was one of the most important, involving an extensive production chain¹⁶ and required an enormous quantity of raw material. In order to build up a national sheep population of quality, an experimental farm, the Bergerie Nationale of Rambouillet, was established by Louis XVI in 1785 and in 1786 it housed the first flock of merinos, acquired from Charles III of Spain, which had been guarding this species until then. When the treaty of Basel was signed, thousands of Spanish merinos joined the national sheepfold. Following this, the writing of an "Instruction on the most appropriate means to ensure the propagation of the Spanish breed of woollen animals and the conservation of this breed in all its purity" by Gilbert in 1798, was systematically distributed to the breeders who bought merinos from Rambouillet. This writing as well as the establishment of secondary farms prove the political will of diffusion and increase of the merinos population on the national territory, it is what was named the Merinization, but this process was very long to see significant results¹⁷. At the end of the 19th century, France continues to import raw wool on a massive scale (reaching 80% in 1885)¹⁸, but the French wool industry continued to grow from 1830 to the mid-1915s, despite a sharp depression from 1894 to 1905. The apotheosis of this period is clearly seen at the world level with the "International Textile Exhibition of Northern France", in Roubaix in May

14 Bogdaniene Eglė Ganda, *Meninis veltinys: Tradicija ir dabartis*, Vilnius Art Academy Publishing House, Vilnius, 2010, p. 40.

15 Jean-François Belhoste, "La maison, la fabrique et la ville. L'industrie du drap fin en France (Xve-XVIIIe siècles).", in *Histoire, économie & société*, 1994, Vol. 14, No. 3, pp. 457-475.

16 François Jarrige and David Todd, "Produire et consommer "à la française". Circulations textiles et insertion dans le capitalisme mondial (1780-1930)", in *D'ici et d'ailleurs*, 2021, p. 137-174.

17 Laurent Brassart, "La ferme des animaux" ou l'invention d'une politique de l'animal utile sous le Consulat", in *Annales historiques de la Révolution française*, 2014, Vol. 3, No. 377, pp. 175-196.

18 *Ibid.*, p.20.



1911, which brings 1.7 million visitors. At that time, Roubaix concentrated a production of 42,000 tons of woolen fabrics¹⁹. It is in part due to the development and improvement of mechanical combing machines that the versatile production of Roubaix between mixed fabrics (wool-cotton) and pure wool, stands out from others. From 1945, the individual demands decreasing, the wardrobe becoming lighter and the administration need for wool uniforms declining, impacted the sector in addition to the return of the Italian competition, the introduction of artificial and synthetic fibres (these last ones being the main production of the woolen carded mill in 1974)²⁰.

Wool Industry in France

After a severe decline of the wool industry in France with the introduction of synthetic fibres in the 1980s, the last large-scale industrial wool processing company closed in 2010²¹. From now on, the French production sells its wool mainly abroad and does not operate almost any more washing of its material, while the main transformers of French wool do not use any more local wool or make the choice of synthetic fibres. This is why local initiatives are being set up to revalorize a local production chain in a short circuit. In the Massif Central region, some initiatives have been created to respond to this problem: Pôle laine is a network made up of several actors who are working for a wool handicraft through insertion activities and a tourist revaluation of this local heritage. The Scop Ardelaine relaunches a wool collection and transformation activities and Terre de Laine produces and sells wool insulating materials in order to revalorize local wools that are not suitable for spinning.

Trying to recreate a local production chain, the Laines Paysannes initiative gathers Occitanie breeders around a short circuit for the whole transformation: from wool picking, through washing and spinning, to weaving or knitting²². Merilainos is a commission gathering merinos breeders in the South-East of France, concerned about the quality and the valorization of merinos wool tries to reduce its export by having its wool combed in Italy and then spun in France at the SICA Mohair.

As for the Collectif Tricolore, its objective is to increase from 4 to 24% the part of the wool produced and transformed in France by 2024. Occitanie, Nouvelle-Aquitaine and Auvergne-Rhône-Alpes are today the three main wool producing regions in France.

19 Jean-Claude Damas, *Les territoires de la laine : histoire de l'industrie lainière en France au XIXème siècle*, 2004, Presses Universitaires Septentrion, 426p.

20 Jean-Claude Damas, "L'industrie lainière en France : un siècle de mutations (1870-1973)", in *Matériaux pour l'histoire de notre temps*, 1997, No. 47, pp.14-20.

21 Jean-Baptiste Grison and Pierre-Antoine Landel, "La filière laine à l'heure de l'innovation sociale. Quelles transformations dans le Massif Central (France) ?", in *Journal of Alpine Research*, 2019, Vol. 107, No.2.

22 Confédération paysanne, "La laine : reprendre le fil et dynamiser une filière paysanne", in *Supplément à Campagnes Solidaires*, 2021, No. 376, [online] <https://urlz.fr/lcFt>



Elisabeth Berthon - wool master designer

Born in 1954, Elisabeth Berthon was a fashion and costume designer for a long time. After graduating model making at the Cambre Syndical of Haute Couture, she worked for Yves Saint-Laurent and Lagerfeld (Chanel). Then she created her own brand Lola Bastille in 1981. Since 2004, Elisabeth has dedicated herself to woolen felt creations and has become one of the rare French felt makers, in top of that she has been trained by breeders, spinners, shearers and felt makers. In 2009 she created Morse Felt Studio and in 2013 she introduced a new practice: the printing of plants on wool felt and other textiles made of natural fibres, this technique is called ecoprint, or botanical printing.

Nowadays, her research is focused on sculptures and wall hangings of all sizes. However she maintains a passion for the wool felt garment, without sewing or fabric scraps.

She has been exhibited a lot in France, but also in Monaco, Belgium, Switzerland, Japan and Italy.

She leads a lot of workshops about felting and eco-printing with participants of all kinds: non-professionals, children, art school students, hospitalized and incarcerated people.

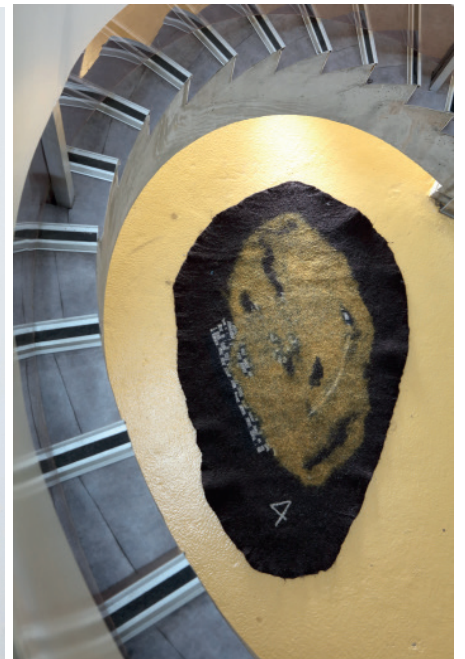
The traceability of the wool she uses is of utmost importance to her. Aware of the limitless potential of felt in fashion (clothes, accessories, jewels, shoes, etc.) and in design (interior design, furnishing, embellishment, etc.) she stands up the wool felt format freedom.



Autoportrait 3_4 face, Berschaf and merinos felted wool, 32x29x19 cm © Olivier Deleage.



Non woven double collar felt jacket
© Olivier Deleage.



Tapis tenture, felted wool, 80x110 cm, 2020 © Olivier Deleage.

Atride 2 ou Patti, Bergschaf and Orenburg felted wool, 58x25x37 cm
© Olivier Deleage

