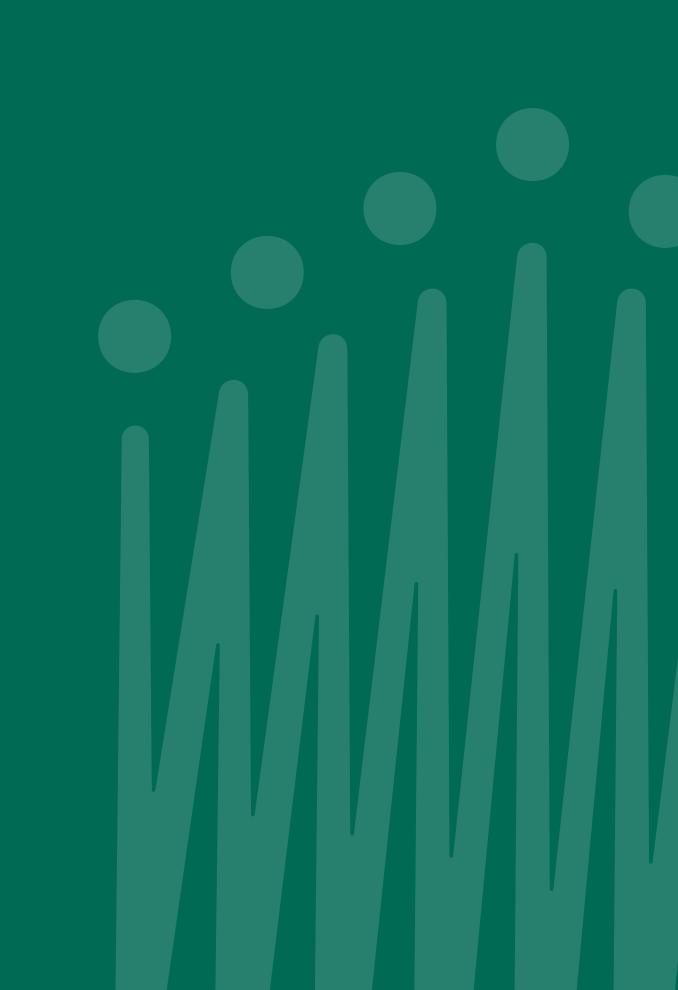
# A Flax-Linen Glossary

Alliance for European Flax-Linen & Hemp



### A

#### Artificial/man-made cellulosic fibres:

Fibres made of natural materials that are usually renewable. Wood cellulose has given rise to viscose, lyocell and modal, and, more recently, processes were developed for bamboo and corn.

### B

#### Bast (see bast fibres):

Elongated cells found between the outer bark and the woody stem of the Flax plant.

### **Baling:**

Flax retting is followed by baling, the last stage of the harvest. The swaths are rolled up into round bales, while maintaining the parallel positioning of the stems, allowing the bales be unrolled during scutching for yarn extraction.

#### **Bast fibres:**

With their remarkable properties such as durability and flexibility, Flax and Hemp fibres are the elongated cells (bast) found between the outer bark and the woody core of the stem. These fibres are released by retting.

### **Blending:**

Hackled rovings of Flax fibres from different batches, regions, and even harvests are blended together. This process is similar to that used for champagne or cognac and draws on the properties of each batch to produce a uniform yarn of consistent and homogeneous quality.

### С

### **Composites:**

Combinations of several materials. Their synergy creates a new material that has superior properties to any of its constituents.

### **Confederation:**

A group of associations or federations.

### F

### **Federation:**

An association of trade unions or companies under one authority.

### Flax fibre:

A stem contains 30 to 40 bundles of fibres arranged longitudinally. Each bundle (known as "technical fibres" in spinning) is made up of 10 to 40 fibres and may include a certain proportion of lignins (2-5% of the dry matter) deposited at the end of maturation. Each fibre is an individual cell of 6 to 10 centimetres, with a diameter of 7-40  $\mu$ m, of which 70-80% is made of cellulose.

### Flax sliver:

Glossy ribbons produced by hackling.

### G

### Gathering:

The last stage of the Flax harvest when the bales of Flax are collected for storage before delivery to scutching mills.

### Н

### Hackling:

A specific operation for scutched long fibres. The fibres are laid out in parallel and calibrated in soft, glossy strands to prepare them for use in wet spinning. The coproducts of hackling, the short fibres which are known as hackled tow, are used in dry spinning.

### Inter-branch organisation:

Inter-branch agricultural organisations are founded because of a desire by different links in the industry chain to become involved in addressing collective issues and challenges at the stages of production, processing and sales, including distribution.

Source: Ministry of Agriculture of France

### Intimate blend:

Blending a mix of fibres to produce a yarn (eg wool fibre and Flax fibre).

3

### L

### Life Cycle Assessment (LCA):

The compilation and evaluation of the inputs, outputs and potential environmental impacts of a product system throughout its life cycle. (ISO 14040:2006).

### Linoleum:

Patented in 1863 by the English inventor Frederick Walton, this antibacterial, waterproof and easy-tomaintain flooring, is made of homogenized flaxseed oil on a cork base.

### Linum usitatissimum:

The botanical name of Flax. Flax is extremely useful, as its textile fibres can be used to produce many derivative products: linseed oil (soaps, cosmetics, paint, printing ink, etc.) and fibres (paper pulp), among others. When it comes to the Flax plant, everything is used!

### Μ

### Mixed plied yarn:

A pure Linen yarn twisted with a different type of yarn (such as cotton).

### Métis:

Fabric made with cotton warp and Linen weft.

### Metric number = Nm

Flax yarn measurement unit (see word Yarn count).



### Natural fibres:

Plant (e.g. cotton, Flax and Hemp) or animal (e.g. wool, cashmere and silk) textile fibres that do not require significant processing.

### Ρ

### Product Environmental Footprint (PEF):

The goal of the PEF method, initiated by the European Union, is to develop a rigorous common method for measuring product environmental footprint.

### **Pulling:**

Pulling is the first stage of the harvest and takes place when the Flax stalks have reached maturity. Flax is pulled to preserve the fibres in the lower part of the stem. Flax pullers pinch the stems halfway from the ground and pull them out as they move forward, placing the Flax on the ground in swaths or windrows.

R

### **Retting:**

The first natural step in the transformation of the plant into fibre after the Flax stalks have been pulled and laid in the field in swaths. The retting process occurs through a combination of moisture (rain, dew), sun, and microorganisms in the soil, whereby enzymes breakdown the natural glues between the fibres and the woody part of the plant. This stage helps facilitate the mechanical extraction of fibres during scutching.

### Roving:

Semi-finished product made of natural Flax fibre with high tensile strength used in the form of continuous technical Flax fibres used in composite material structures.

## S

### Scutching:

The separation of the components of Flax straw, short fibres, long fibres, shives and seeds, through mechanical crushing and threshing. Can take place throughout the year.

### Shives:

The wooden parts of the Flax plant extracted during scutching. Shives account for about 50% of Flax straw and are used as bedding for horses, in mulching, to make particle boards and as fuel for heating.

### Spinning:

Spinning includes various operations for processing fibres into yarn. Homogenized and stretched, the rovings are twisted into strands through spinning. The techniques are selected based on the type of yarn desired:

- "Wet" spinning, which involves immersing the fibres in water heated to 60°C, promotes the gliding of the fibres and works well for fine yarn (clothing, household Linen, etc.)
- "Dry" spinning creates more rustic and thicker yarn for use in furniture, ropemaking etc.

#### Swaths / windrows:

After being pulled, Flax stalks are placed on the ground in swaths or windrows to begin dew retting.

#### Synthetic fibres:

Fibres derived from petrochemicals, including polyester, nylon, acrylic and elastane.

### The European Scientific Committee (ESC) of the Alliance:

Eight experts from research fields combine their skills to provide an overview of the current situation and to promote open innovation together with the European Flax-Linen industry.

### **Technical textiles:**

Materials manufactured for their technical performance and high quality (high mechanical, temperature, and even dielectric performance), allowing for adaptation to multidisciplinary technical functions. These materials are used in the most advanced technological fields: space, aeronautics, rail, medical, maritime, construction materials, chemical protection, sports equipment, etc.

### W

#### Washed Linen:

Linen with an aged effect brought about by various processes which give it a softer touch.

#### Weaving:

Type of fabric construction: warp threads are kept in tension on the loom and a shuttle is used to pass weft threads under and over the warp threads to achieve weave patterns from plain weave – over under over under – to more complicated designs.



#### Yarn count:

Flax spinning creates a broad variety of yarns categorised using a metric number (Nm). This number refers to the number of kilometres produced using 1 kg of yarn. Higher numbers correspond to higher yarn (e.g., Nm 6 = 6 km per kilo for upholstery fabric; Nm 39 = 39 km per kilo for light fabric used in clothing).

Ζ

#### Zero waste:

100% of the products of the Flax plant are used up.



5







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