



Shearing

The processing of British wool

In Britain there are more than 60 hill, mountain and downland sheep breeds, which produce in the region of 27 million kilos of fleece wool annually.

The shearing process

Once a year, usually in the warmer months, sheep are gathered for shearing. This does not hurt the sheep and is required for their welfare.

A professionally trained shearer is a skilled and careful practitioner, able to shear one sheep in less than two minutes - 250 sheep in one day.

Depending on the breed, a fleece can weigh anywhere between 1.5 - 10kgs.

Wool sheets

Fleeces must be kept clean and dry after shearing. Each one is rolled and then packed into a big sack called a 'wool sheet' ready for delivery to British Wool for grading.



Grading

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All raw wool from the British Wool farming community is delivered to a British Wool grading depot, part of a national network owned and operated by British Wool.

The grading process

The fleece is graded using a series of criteria (such as colour, length and strength of the staple) into quality and type. These range from short, fine Downland wool to the coarser Hill and Mountain breeds.

Fleeces of the same grade are pressed into tight bulk bales for efficient handling and storage before and after sale.

Samples of every bale are objectively measured and tested to international standards for length, thickness, colour and amount of grease and vegetable matter. The average of the readings is provided on every certificate to accompany every sale lot.

What does grading involve?

The grading process involves a detailed examination of each raw fleece (grading), packing and testing.



Auction

The processing of British wool

The auction process

As well as objective measurement certification on every lot to be sold, buyers also have the option of viewing the sample bales of wool before a sale takes place.

British Wool holds regular auctions throughout the year at its Bradford headquarters. Wool is sold electronically and bidding is in pence and half pence per kilo.

Once sold, the wool is transferred to the scouring plant for the first stage of processing.

British Wool auctions

All wool is offered through our fully computerised auction system with a catalogue being produced and sent to all buyers a week before the sale. All sales are held at our Bradford headquarters.



Scouring

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The scouring process

Washing

Wool is naturally coated with grease, and also mud, seeds and thorns picked up in the fields. Wool is washed clean in a series of baths containing detergent and hot water.

Rinsing

Wool is thoroughly rinsed and squeezed through rollers to remove most of the moisture.

Drying

Wool is dried. This final stage of the process produces scoured (or clean) wool.

Lanolin

Wool loses about 30% of its weight when the grease is removed. This is purified to produce lanolin, and used in face and hand cream, soap and ointment.



Carding

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The carding process

The scoured wool is now clean and white but very tangled.

The tangled scoured wool is passed through a carding machine (or card), a series of rotating rollers covered with pointed teeth or wire.

This part of the process gradually separates the tufts of wool into individual fibres and removes odd pieces of hay and straw which still remain.

Carded wool

Carded wool is removed from the machines as a continuous ribbon of loose fibres. This is now ready for further processing - spinning as part of the woollen process or combing as part of the worsted process.



Combing

The processing of British wool



The combing process

Combing

Clean, untangled wool runs through a series of teeth, removing short fibres (noils) and drawing out long fibres to align them in one direction.

Making a 'Top'

With the longer fibres lying in parallel, a continuous rope, or 'sliver' of wool is produced, called a 'top'.

Winding

The 'top' is wound into a ball or 'bump', ready for spinning.

Combed wool

The combed wool is now ready for spinning. Wool to be used for woollen yarn is not combed, the fibres require a natural texture ready for spinning.



Spinning

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The spinning process

The sliver of wool is passed on to a series of machines which twist and draw out the fibres into a continuous thread of the correct thickness. Worsted yarn is spun more tightly and is stronger than woollen yarn.

Woollen Yarn

Woolly, or hairy irregular appearance, usually bulky.

Uses: Knitwear and carpets

Worsted Yarn

Strong with a smooth, regular appearance.

Uses: Cloth

Spinning: one process, different inputs

Woollen process: long and short fibres distributed at random.

Worsted process: Long fibres lying in parallel.



Weaving

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The spinning process

Weaving is interlacing two sets of threads at right angles to each other. This is carried out on a 'loom'. The yarn which runs the length of the fabric is called 'warp', and the yarn interwoven across the warp is called 'weft'.

The weaving process is carried out by a shuttle. Modern looms are computer operated at very high speeds. Several shuttles can build up complicated and interesting patterns.

Carpet

The carpet is ready for distribution.

Cloth

The cloth is now ready for making into a finished product.

Yarn

The spinning process produces yarn which is ready for weaving into cloth or carpet. The principle is the same for both.



Dyeing

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The dyeing process

Loose Stock Dyeing

This method is carried out before carding, and is more common in the woollen process.

Top Dyeing

Only carried out in the worsted process.

Package Dyeing

Dyeing the spun yarn in a hank (shown above) or on a cone.

Piece Dyeing

Adding uniform colour to the finished fabric or knitwear.

Dyeing

Dyeing can take place at different stages of wool processing.