



Fast facts

- Natural fibres come from animals and plants.
- True synthetic fibres are reproduced in laboratories from petroleum-based chemicals.
- Natural fibres are biodegradable, renewable and environmentally friendly.

Natural fibres

Natural fibres are fibres that come from animals or plants.

Wool is an entirely natural fibre grown by Australian Merino sheep.

Merino sheep are **free-range animals** managed by woolgrowers using modern farming practices that protect the environment while ensuring the sheep are healthy.

Wool is a completely **renewable** fibre resource. Every year, after **shearing**, sheep produce a new fleece, which can be shorn off again the following year.

Natural fibres, such as wool, are totally **biodegradable**.



Nature's fibre: Wool is grown year-round by the Australian Merino, consuming a simple blend of water, air, sunshine and pasture (grass).



Did you know?

 Nylon, the first synthetic fibre, was developed as a replacement for silk around the time of World War II. It's most famously used to make women's stockings but was also used as a replacement for the silk in parachutes and other military uses.

Wool is made of a natural protein, similar to that found in human hair. When disposed of, wool decomposes in soil in a matter of months to years, releasing valuable nutrients back into the earth, acting like a **fertiliser**.

In contrast, synthetic fibres can be extremely slow to degrade.

Other natural fibres

The most common animal-based fibres include:

- wool (sheep)
- cashmere and mohair (goats)
- alpaca (alpacas)
- angora (rabbits)
- silk (silkworms).

The most common plant-based fibres include cotton, flax and hemp.

Synthetic fibres

Synthetic fibres are man-made fibres developed in laboratories. There are two types of synthetic fibres — artificial fibres and true synthetics.

Rayon and acetate are examples of artificial fibres derived from cellulose in wood pulp.

Although a natural product, the extreme amount of processing means these fibres are no longer considered natural fibres.

True synthetics are made from 'synthesised polymers' — manmade substances. The compounds used to produce synthetics are often petroleum-based chemicals.



Man-made fibres: Synthetic fibres are made in laboratories using petroleum-based chemicals.

Glossary

Biodegradable — a substance that will decompose naturally.

Fertiliser — nutrients that are added to the soil to help plants grow.

Free-range animals animals that live and graze in large open paddocks.

Renewable — resources that can be replenished after they have been used.

Shearing — removing the wool from the sheep using specially-designed handpieces.

NATURAL FIBRES VS SYNTHETIC FIBRES

NATURAL FIBRES	SYNTHETIC FIBRES
Made from animals or plants	Made from man-made chemicals
Often more expensive than synthetics	Often less expensive than natural fibres
Biodegradable	Resist breaking down after use
Do not melt and stick to the skin when burned	Can be highly flammable and melt on skin before burning
Totally natural, renewable source	Non-renewable, petroleum-based (oil-based) chemical

Wool products

While most of Australia's fine Merino wool is used in high-fashion garments, wool is incredibly versatile and is used in a wide range of everyday products.

Wool is used to make other clothing such as sportswear, business suits

and underwear. It can be used for clothing designed to keep you warm or clothing designed to keep you cool — it is a versatile natural fibre. Other products made from wool include carpets, upholstery fabrics and household furnishings such as curtains, blankets and bed linen (including doonas and underlays), medical dressings and insulation.



Sleep tight: Studies are showing promising results for sleep on, in and under wool.

More information

For more information about wool, go to:

- learnaboutwool.com
- Beyond the Bale: beyondthebale.wool.com
- woolmarklearningcentre.com

• The fibre, yarn and fabric samples that came with the Learn About Wool Kit.



