

WOOL IS 100% NATURAL AND RENEWABLE

Australian wool is grown year-round by the country's 70 million sheep, consuming a simple blend of water, air, sunshine and grass. Every year, these sheep produce a new fleece, making wool a completely renewable fibre.



WOOL IS NATURAL

Natural fibres are produced by plants and animals as soft fibrous material that can be spun into filaments or threads. Characteristics of natural fibres are that they:

- serve a purpose in nature;
- are produced by a living organism; and
- grow spontaneously, without need for human intervention.

Arguably the oldest known animal fibre, wool is composed of a protein called keratin which, like human hair, is produced from follicles within the skin of mammals.



WOOL IS RENEWABLE

Natural fibres are renewable, meaning that they are able to regrow and replace themselves. In contrast, synthetic fibres such as polyethylene are made using industrial processing of oil, which is a non-renewable fossil resource.

Wool is now produced in more than 100 countries on half a million farms where sheep (*Ovis aries aries*) are shorn, usually once every year to remove their continuously growing fleece. Australia is undoubtedly the predominant home of Merino wool, producing about 60% of all apparel wool and 90% of the fine apparel wool.

Wool is 100% biodegradable, so at the end of the life of each wool garment, valuable nutrients are released back into the earth. See our factsheet for [Why Wool is Biodegradable](#).

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CHARACTERISTICS OF WOOL FIBRE

Natural fibres have been used by civilisations for millenia, and they continue to provide fabric for clothing and to insulate, soften and decorate our living spaces. Wool textiles which have been found in Denmark date back to 1500 BC, and wool is still valued today for the exceptional characteristics which make it the world's premier textile fibre.

Wool's natural crimp and scale patterns make it easy to spin and its ability to absorb and release moisture not only protects sheep from the elements, but makes wool garments comfortable in all temperatures. Increasingly, wool's qualities of strength and moisture management, temperature and odour control are enabling this traditional fibre to be adapted to innovative purposes, including high-performance athletic wear, health and wellness products and technical textiles.

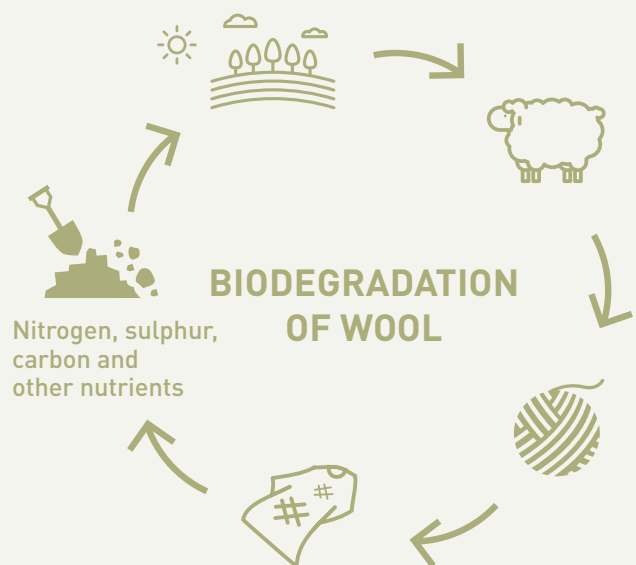


NATURAL, RENEWABLE FIBRES ARE A RESPONSIBLE CHOICE

Unlike synthetics which are industrially produced from non-renewable fossil energy, natural fibres are a natural process using a simple blend of natural ingredients. For wool this is water, air, sunshine and grass.

Of the major apparel fibres wool is the most reusable and recyclable fibre on the planet. The eco-credentials of wool are enhanced by its long service life and suitability to be recycled to new textiles for clothing, resilient upholstery or products that call on its natural resistance to fire and temperature extremes. Aside from premium next-to-skin apparel, wool can be used in industrial applications such as thermal and acoustic insulation or in pads to soak up oil spills.

At the disposal stage, natural fibres such as wool reduce the impact of the textile industry on pollution and landfill build-up. In warm, moist conditions such as in soil, wool biodegrades rapidly through the action of fungi and bacteria to essential elements (i.e. Nitrogen and Sulphur) for growth of organisms as part of natural carbon and nutrient cycles.



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REFERENCES

Wool, arguably the oldest known animal fibre: <http://www.naturalfibres2009.org/en/fibres/>

Wool is now produced in more than 100 countries on half a million farms where usually once every year to remove their continuously growing fleece. IWTO Market Information Edition 12, Statistics for the Global Wool Production and Textile Industry, 2016, 30. AWTA Key Test Data, 2015-2016, 77-81.

Australia is undoubtedly the predominant home of Merino wool, producing about 60% of all apparel wool and 90% of the fine apparel wool: Swan, P. The future for apparel wool, International Sheep and Wool Handbook, Ed. D.J. Cottle, Nottingham University Press, ISBN. 2010. 978-1-904761-64-8.

Wool products are 100% biodegradable, so at the end of their life they release valuable nutrients back into the earth: McNeil et al. *Closed-loop wool carpet recycling*. Resources, conservation & recycling 2007, 51: 220-4.

Wool textiles which have been found in Denmark date back to 1500 BC, and wool is still valued today for the exceptional characteristics which make it the world's premier textile fibre: Wool, arguably the oldest known animal fibre: <http://www.naturalfibres2009.org/en/fibres/>

Of the major apparel fibres wool is the most reusable and recyclable fibre on the planet: Russell SJ et al. *Review of wool recycling and reuse*. Proceedings of 2nd International Conference on Natural Fibers, 2015, 4.

In warm, moist conditions such as in soil, wool biodegrades rapidly through the action of fungi and bacteria: Agarwal PN, Puvathingal JM. *Microbiological deterioration of woollen materials*, Textile Research Journal, 1962, 39:38-42.