

Cotton

Water footprint: 2700 litres for 1 cotton shirt.

In order to get 1 kg of final cotton textile, one requires 11,000 litres of water (as a global average). Thus, when we have a shirt with a weight of 250 gram, this shirt costs 2700 litres. Of this total water volume, 45% is irrigation water consumed (evaporated) by the cotton plant; 41% is rainwater evaporated from the cotton field during the growing period; and 14% is water required to dilute the wastewater flows that result from the use of fertilisers in the field and the use of chemicals in the textile industry.

Globally, the annual cotton production evaporates 210 billion cubic meters of water and pollutes 50 billion cubic meters of water. This is 3.5 % of the global water use for crop production.

A cotton shirt is made from cotton fabric, which is made from combed or carded cotton, which is derived from cotton lint, which comes from seed cotton, which is harvested from the cotton field. Indeed, before the final cotton textile reaches to the hands of a consumer it passes through a number of intermediate processes and products. First the seed cotton is processed into lint (we get only 350 kg of lint out of 1000 kg of seed cotton), then after carding, spinning and weaving we get grey fabric (1000 kg of lint produces only 900 kg of grey fabric), then it goes to the wet processing (bleaching and dyeing) and finishes as final printed cotton textile. It requires about 30 m³ per ton for bleaching, 140 m³ per ton for dyeing and 190 m³ per ton for printing. The average water footprint of printed cotton (for example a pair of jeans weighing 1 kilogram) is 11000 litres per kilogram.

<http://www.waterfootprint.org/?page=files/productgallery&product=cotton>