CHAPTER 9
Cotton as a Consumer Product
COTTON REMAINS THE WORLD’S FAVOURITE NATURAL FIBRE, WITH A HUGE RANGE OF DESIRABLE CHARACTERISTICS INCLUDING VERSATILITY, APPEARANCE, PERFORMANCE AND ABOVE ALL, NATURAL COMFORT.

Cotton is used to produce thousands of useful products from sheets and towels, tarps and tents, pharmaceuticals and medical supplies - even astronauts’ inflight space suits.

In the United States of America, textile mills consume approximately 7.6 million bales of cotton a year. Of this, about 57% is converted into clothing, more than a third into home furnishings (bedspreads to window shades) and the remainder into industrial products (eg medical supplies, industrial thread and tarps).

The Properties of Cotton
Cotton has many special properties including the following remarkable characteristics:

- Stains can be easily removed from cotton
- Cotton is a good conductor of heat. In other words, it draws heat away from your skin to keep you cool, making it very comfortable to wear
- Cotton becomes stronger when wet
- Cotton absorbs moisture easily and can take up to one fifth of its weight in water
- Cotton’s strength and absorbency make it an ideal fabric for medical and personal hygiene products such as bandages and swabs
- Cotton is very versatile – it can be blended, coated, finished, is dry cleanable, machine washable and easy to print
- Cotton is not easily damaged by sunlight and is therefore often used in the manufacture of curtains, tents and tarps
- Cotton breathes easily as a result of its unique fibre structure. This attribute makes cotton more comfortable to wear than artificial fibres unable to provide ventilation
- The cool properties of cotton are ideal for the Australian environment. Australians are one of the highest cotton consumers in the world due to our climate and lifestyle
Cotton lint is spun then woven or knitted into fabrics such as velvet, corduroy, chambray, velour, jersey and flannel. About 60% of the world’s total cotton harvest is used to make clothing, with the rest used in home furnishings and industrial products. Well known cotton products include denim jeans, socks, towels, t-shirts, bed sheets and underwear. More unusual uses of cotton fibre include tents, car tyre cord, fishnets and book binding.

Over half the weight of unprocessed cotton (seed cotton) is made up of seed, a valuable by-product of fibre production. One tonne of cottonseed yields approximately 200kg of oil, 500kg of cottonseed meal and 300kg of hulls. Global cottonseed production can potentially provide the protein requirements for half a billion people per year and many billions of other animals. The most common uses of cottonseed are oil for cooking and feed for livestock. Cottonseed is pressed to make cottonseed oil. Cottonseed can be made into a meal and is a popular feed for cattle and livestock as it’s a great source of energy. Cottonseed oil can also be used in a range of industrial products such as soap, margarine, emulsifiers, cosmetics, pharmaceuticals, rubber, paint, water proofing and candles. Cottonseed oil is cholesterol free, high in poly-unsaturated fats and contains high levels of anti oxidents (vitamin E) that contribute to its long shelf life.

Cotton linters are fine, very short fibres that remain on the cottonseed after ginning. They are curly fibres typically less than 3mm long. Linters are used in the manufacture of paper (such as archival paper and bank notes) and as a raw material in the manufacture of cellulose plastics. Linters are commonly used for medical supplies such as bandages, cotton buds, cotton balls and x-rays.

Fact Sheet: Interesting Cotton Facts
Case Study: American cotton marketing giant Cotton Incorporated is constantly finding new and innovative applications for cotton fabrics
Case Study: Nothing is wasted. See how recycled textile fibres are being used as reinforcements for polymer composites