



Types of cotton and their significance

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ABSTRACT

Cotton is the world's most used fibre. Cotton is number one fibre used for apparel in United States. In 1994, a survey on cotton found that 63 percent of cotton was used for apparel, 29 percent for home furnishings and 8 percent for industrial type products and exportation. Cotton comes in several types, depending on the way it is grown or processed. There is no way to the consumer to know the true quality of Egyptian cotton used in manufacture of a product. It is possible to purchase a product labeled 100% Egyptian cotton with the expectation of it being made from the very finest cotton, when in fact it could be made from lesser quality, non-ELS Egyptian cotton. Therefore, a modest attempt is made to divulge the nature, characteristics and applications of various types of cotton grown in the world and their significance.

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Introduction

People called cotton as 'White Gold' (Savanam and Bhaskara 2010a). It is the most important natural fibre which provides venerable foreign exchange to meet the balance of payments and facilitates a number of employment opportunities to the society at large (Savanam & Bhaskara 2010b). Cotton is grown mainly for lint which is only 1/3rd portion of the seed cotton. It is produced in as many as nine states in India (Sethi and Dharmarajulu 1957). India commands special attention as the world's second largest cotton producer, consumer and exporter. With recent technological advances and market liberalization, India has emerged as major player in the world cotton economy in the 21st century. The area of cotton cultivation in India is about 11.1 million hectares (Savanam *et al.* 2010).

Today, cotton remains a major export of the southern United States. Cotton has been spun, woven, and dyed since prehistoric times. Cotton comes in several types, depending on the way it is grown or processed. Cotton fabrics are valued with their grade and quality. In cotton fabrics, usage of mixed cotton blends is very common practice. Therefore, it is rather difficult to differentiate the grade and quality used in fabrics.

Grades of cotton

There are three grades of processed cotton viz., low, medium and high. Besides, there is an organic grade made from cotton grown with no pesticides or fertilizers.

Low grade cotton

Low grade cotton is very easy to grow and process. It makes very cheap cloth. Light weight fabrics made from this cotton are very weak and limp. They wear out quickly and launder poorly. It is found in mass produced goods and cotton blend goods. Asiatic short-staple cotton is an example of low grade.

Medium grade cotton

Medium grade cotton is less expensive version and is very basic quality. It is suitable for denim for blue jeans. It is found

in mass produced goods and cotton blend goods. American Upland short-staple cotton is an example of medium grade.

High grade cotton

High grade cotton includes long-staple cotton that is being used in luxurious, soft products, fine quality shirting and bedding fabrics. For instance, a high grade Egyptian cotton has been produced in the Nile River Valley for many centuries. Other types of this grade include Pima or Supima and Sea Island cotton.

Organic grade cotton

Organic grade cotton is grown without use of commercial pesticides and fertilizers. It is harder than the usual cottons. Regular department stores normally do not sell items with organic cotton, but there are many online retailers for it. The clothes manufactured from organic cotton are not exposed to the environmentally harmful chemicals.

Types of cotton

There are several species of cotton that grown wild but are not economically feasible. Different types of cotton are often identified by the name of the region or the country where it is produced. There are five types of cotton grown commercially around the world. They are Egyptian cotton, Pima cotton, Sea Island cotton, Asiatic cotton and American Upland cotton. All of them have some resemblance but differ in colour of flowers, fibre and time of blooming.

Egyptian cotton

Egyptian cotton is regarded as 'cotton queen of the Nile'. It is light brown in colour, fine, lustrous, strong, durable and silky hand feel to its extra-long fibre staple and, is widely sold all over the world. It has longer and thinner fibres. These fibres formulate strong yarn that makes nice and smooth fabrics. It is often used for manufacture bed sheets, cushion covers etc. A piece of Egyptian cotton has a much more extensive weave than other types of cotton. Towels made from Egyptian cotton are particularly desirable because they are very soft and help absorb water from the body quickly.

Long-staple cottons are more expensive than the commonly available cottons because they are synonymous with quality and have thread count. The quality and feel of a sheet depends on the fibre, and the fabric is making from and the number of threads woven per inch. The higher the thread count, the softer and durable the sheet. Egyptian cotton thread counts range from 200-1500.

Egyptian cotton is very tricky brand. Egypt is one of the largest producers of extra-long staple (ELS) cotton in the world, but not all the cotton grown in Egypt is ELS cotton. It is possible to purchase a product labeled 100% Egyptian cotton with the expectation of it being made from the very finest cotton, when in fact it could be made from lesser quality, non-ELS Egyptian cotton.

As a matter fact, there is no way to the consumer to know the true quality of Egyptian cotton used in manufacture of a product. At Egyptian Cotton Kingdom all products are manufactured from the finest 100% Egyptian long staple cotton single ply (one ply) and weave is sateen.

Pima cotton

Pima cotton is named after the Pima Native Americans who first cultivated the plant in the United States, but origins date back to its cultivation in Peru. Cultivation of this form of cotton became especially popular in the early 20th century. Pima cotton is grown primarily in the South-west region of the U.S., Peru, Australia and a few other countries. In the U.S., it is grown in Texas, New Mexico, Arizona and Southern California. Pima cotton is popular for its long and smooth fibres. The fibre is fine, strong, silky, lustrous and creamy white in colour. The strength, softness, durability and absorbency of the Pima cotton make it one of the popular and finest types of cotton for clothing, towels and sheets. It is widely used for different kinds of apparel and home furnishing fabrics. Unlike the more common upland cotton, which is of the species *Gossypium hirsutum*, Pima cotton is of the *Gossypium barbadense* species.

Supima cotton is a brand name given to Pima cotton grown in the U.S. "Supima" is a licensed trademark of the Supima Association of America and exists to promote the brand. A product labeled Pima cotton might contain ELS cotton grown in the U.S or elsewhere, but a product labeled Supima cotton must contain only ELS cotton grown in the U.S.

Pima cotton bears some similarities to many forms of Egyptian cotton, which is frequently used in towels and sheets. Since Egyptian cotton was so desirable, the U.S has decided to grow a type of it in the South-west region, which contains somewhat similar climate to Egypt. The resultant cotton was a mix of Egyptian and other types of cotton. Pima cotton is little shorter than Egyptian cotton but still yields a thread that can be woven multiple times into a piece of fabric to create a dense and soft fabric. Pima cotton thread counts range from 200-300.

Pima cotton has applications in a wide variety of products. Pima cotton in clothing is most often used in shirts for both men and women. Woven sweaters made with Pima cotton are also quite popular. They are light to wear, yet provide superior warmth. Men's socks can be made with Pima cotton, but will often include some elastic to keep the socks up. Men often prefer these socks above others because of their so fitness and density. Additionally they tend not to wear out quickly.

One of the advantages of Pima cotton is that the thickness of the cloth it weaves creates a very durable fabric. Those who market this cotton claim their products can last up to 50% longer than fabrics made from other forms of cotton. A disadvantage to

Pima cotton is that greater absorbency means stains are more readily formed. Some retailers who use Pima in clothing now coat the cloth with an anti-stain guard.

A word of caution: Read the label carefully. If the label says "Pima cotton" and not "100% Pima cotton" then it is likely the Pima cotton that has been blended with Upland cotton. People typically assume the "100%" part when reading a label that says "Pima cotton". But if it doesn't say 100% don't assume 100%. The labeling used by manufacturers has become much more forthright in recent years.

Sea Island cotton

Sea Island cotton happens to be a 'pricey affair' for its growth and processing in the world of cottons. Its long staple and silky texture make it to be used in the finest cotton counts and mixed with silk. So, whenever one notices the label of 'Sea Island Cotton' on shirt, knows that the piece might get a little heavy on pockets. It is typically used in very expensive men's shirts since its extremely limited supply and very expensive to grow and to process.

Asiatic cotton

India, China and Near East are the places where Asiatic type of cotton is produced. It has coarse and harsh fibres and thus suitable for manufacturing products like blankets, filters, coarse clothes, padding materials and the like. The cotton is often used for apparel home furnishing and surgical supplies.

Asiatic short staple: It is very easy to grow and process, and hence makes very cheap cloth. Unfortunately, light weight fabrics made from this cotton are very weak and limp. They wear out quickly and launder poorly.

American Upland cotton

One of the most commonly used types of cotton is the American Upland cotton. It is less expensive and of a basic quality, and is also used to make several types of fabrics. The versatility of the cotton makes it usable for manufacturing expensive shirts and denim. This cotton is only "long staple" as compared to American Upland Short Staple cotton. The American Upland cottons now comprise up to 90% of the world's crop. They are much easier to grow and process and are therefore much less costly. They are perfectly adequate for medium quality fabrics. They are also unsuitable for high thread count sheets, as they will feel limp and coarse after a few launderings. This is the cotton used in bargain duvets and in inexpensive "luxury" sheets.

American Upland Short Staple cotton: It is less expensive version of cotton and has very basic quality. It is suitable for denim for blue jeans.

Other types of cotton

Canton cotton

Canton cotton is the most popular type of cotton. It is used for manufacture winter clothing like sweaters because of its heavy nature. It is strong, soft and difficult to pull apart, making it suitable for the purpose.

Bamboo cotton

Bamboo cotton is very soft and half organic. The crushed bamboo mixture along with the organic cotton is used to manufacture the fabrics and clothing. Like Organic cotton, Bamboo cotton is an all-natural and chemical free material which makes it a perfect choice for both the environment and skin.

Cotton Twill

Cotton Twill is lighter flannel-like cotton. It is good for all wear since it is a bit lighter than Canton cotton. Twill fabrics

technically have a front and a back side, unlike plain weave, where the two sides are the same.

French Terry cotton

French Terry cotton is heavy cotton than Cotton Twill but slightly lighter than Canton cotton. It is soft cotton with a short nap.

Honeycomb cotton

Honeycomb cotton is a lightweight type of cotton that dries quickly. Baby blankets, polo and lawn shirts, robe pinks, tea towels, juicy couture jackets and coats etc. are made out of honeycomb cotton.

Oxford Chambray cotton

Oxford Chambray cotton is medium weight cotton.

Advantages of cotton

Cotton has unique feelings and texture to it. It lets the skin breathe. Most people like the way cotton clothing feels on their body. Cotton material is great for sweaters, underwear, pajamas, shirts, shorts, pants and practically anything that one can wear. Examples of items made from cotton are all types of apparel in 100% cotton and in blends with other fibres, bedding products, draperies and curtains, upholstery fabrics, rugs, wall coverings, medical, surgical and sanitary supplies, industrial abrasives, book bindings, handbags and luggage, shoes, tobacco cloth, wiping cloths etc.

Disadvantages of cotton

Some people have found that they are allergic to cotton. It could be a particular type of cotton that is used for their clothing, or a chemical that is used in growing the cotton or manufacturing the clothes. Hence, people who think that they might be allergic to cotton might just be allergic to the chemicals in non-organic cotton clothes.

Conclusion

Regardless of the type of cotton that is in clothing, one can always tell that it is indeed cotton. Organic and Bamboo cotton are really good for the environment because they don't use many of the harmful chemicals like dyes, pesticides and other things that pollute the environment. The process of growing cotton and making clothes can potentially involve heavy use of

environmentally harmful materials that contribute to global warming and the destruction of the ozone layer. Thankfully, some companies are making strides to make more organic clothing so that the things that people wear are 'greener'.

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