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TEXTILE STUDY - COTTON

by
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The vegetable fiber cotton is of more value to mankind than any one of the other textile fibers, on account of its cheapness, its availability, and its varied usefulness. The materials made from it range from the finest threads, mulls and laces, to heavy blankets and sail cloths. Its value is enhanced by its resemblance, after special treatment to linen, wool, or silk, by which warmth and attractive appearance may be gained at small cost. The supply of cotton usually equals the demand, so that the finished product may be put on the market at reasonable prices.

Botany and Growth:

In the United States the cotton plant is an annual plant which grows to a height of from four to six feet. In South America and India a more tree-like cotton grows. The leaf of the plant often varies in shape on different parts of the stem. The flower has five whitish or yellowish petals. They last a day, become purplish in color and drop off leaving a three or five-celled pod which increases in size and finally bursts into sections, disclosing the cotton fiber covering the seeds.

Field Picking:

Cotton must be picked as soon as it is ripe. The picking is done both by hand and by machine, and an effort is made to pick only the ripe fibers as the presence of the unripe injuriously affects the character of the whole.

Weighing and Ginning:

Cotton is weighed after picking, about two-thirds of its weight is due to the seed which is still attached to the fiber. Ginning is done by machinery. It separates the seed from the fiber.

After going through several more processes, cotton is finally made into thread and this in turn is woven into material.

A familiarity with standard materials is essential to intelligent buying. Standards are fabrics which have been known for years and their qualities have been tested and proven. Other qualities and materials can be judged from these standards.

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STANDARD COTTON MATERIALS

Batiste - A sheer lustrous cloth in white and dainty colors. Used for waists, thin dresses, collars and cuffs.

Calico - Plain weave with design printed on one side. Used for inexpensive dresses, aprons, because of its low cost, durability and ease with which it is laundered.

Cambric - Plain weave with smooth finish on one side. Used for linings and underwear when moderate weight is desired.

Canton Flannel - Soft nap on one side. Used for children's underwear and for coat interlinings because of its durability and warmth.

Chambray - Plain weave, dyed in yarn. Used for dresses, and aprons.

Corduroy - Corded, ribbed with velvety finish on one side. Used for suits, heavy dresses and skirts.

Flannelette - Soft cloth with nap on both sides and figures printed on plain backgrounds. Because of its warmth, low cost and ease of laundering, used for nightgowns, underwear and children's wrappers.

Cretonne - Plain weave, with a printed design. Used for curtains and bed coverings.

Dimity - Plain weave with variations. Because of daintiness, used for dresses, waists and curtains.

Gingham - Plain weave with warp and wool of various colored threads to form plaids and checks. Used for dresses, aprons and shirts. Laundered well.

Galatea - Heavy firm weave, with design printed on one side. Used for children's clothes, outing suits, when a cloth of strength and durability is desired.

Lawn - Plain weave of fine material, usually well sized. Used for dresses, waists, collars, cuffs and curtains.

Longcloth - Soft, firm fabric with a close weave. Used for children's dresses, aprons and underwear.

Muslin - Plain weave made in several qualities, bleached and unbleached, used for sheets, dresses and underwear when durability is chief desire.

Nainsook - Plain weave, closely woven, used for underwear.

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Percale - A firm, closely woven cloth. Used for dresses, shirts, and aprons because of low cost, durability, and ease of laundering.

Pique - Ribbed material. Used for dresses, skirts and children's coats.

Poplin - Plain weave; poplin variety. Used in dresses, summer suits because of its durability and ease of laundering.

Sateen - Shiny finish on one side. ~~Used~~ for linings, undergarments because of its durability.

Voile - Loosely woven, thin material used for dresses and waists.

CHARACTERISTICS OF COTTON

1. Cotton is strong and elastic.
2. Burns easily on account of the natural oil in it.
3. Free from impurities and bleaching cleanses it still more. It can be stored for a long time without deterioration, unless sizing and starches or certain dyes are present.
4. Absorbs water slowly and does not give it up quickly, consequently it remains damp a long time. To render cotton absorbent the cotton wax is removed.
5. Moist cotton is stronger than dry cotton. When cotton is heated as under a very hot iron, its strength is less. Alternate moisture and heat do not hurt cotton unless heat is too great.
6. Cotton crushes and creases easily. The surface of napped goods and blankets easily flatten down and take on a rough, shabby look unless often brushed and shaken.
7. Cotton soils readily. It has a fuzzy surface and contains a natural oil which catches dust quickly.
8. Cotton gives off lint. This makes it less desirable for toweling and dining room service than linen.
9. Cotton shrinks in water. This is a natural property but is argumented in weaving. The strain on the warp threads in the loom stretches the yarn to its full length, and the sizings and starches hold it there. Warm water and warp in the laundry loosen the finish and the yarn contracts. The shrinking must be taken into consideration when cutting garments.
10. Cotton launders well. It can be boiled without injury to fiber.
11. Cotton takes starch well, thus it can always be kept looking new and fresh.
12. Cotton is a better conductor of heat than wool or silk, consequently when thin it is a satisfactory summer garment.

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13. Cotton is not attacked by moths or insects like wool. Mildew will form if cotton is left in a warm moist place.
14. Cotton takes dyes well. Materials which are yarn dyed usually retain their color better. Yard dyed materials are gingham, madras and chambray, which have the same colors and patterns on both sides of the cloth. If the thread is of one color and dyed so that white specks are left, it has been piece dyed, that is, woven and then dyed. Examples: galatea and oil-boiled calico.

Another method of dyeing, which we find, is printing the design on the material. Examples: percale, calico, figured voiles and challies.

Mercerization

A modern product is mercerized cotton, made by treating the fiber or the cloth with strong alkali and then rinsing it under tension. To obtain a high degree of luster, the best quality of cotton is required. Mercerized cloth is stronger, heavier and more silky looking, than the same cloth not mercerized. The high luster is not affected by repeated washings.

Cotton Tests

1. Tests for Sizing.

Rub the cloth vigorously. If sized, a fine dust will be loosened. Hold up to light and notice the filling or sizing between the threads in the weave.

2. Thumb test for strength of weave.

Quickly and firmly stretch the cloth lengthwise, then crosswise over the thumbs. Do the threads stretch, pull or loosen? Will this material pull on the seams when made into a garment? Try breaking a thread; notice the strength. Ravel a thread out; notice whether the fibers are long or short. Thread made of long fibers are best.

3. Burning test.

Ends of cotton threads will spread out when burning. Cotton burns, readily, leaves fine gray ash, has odor of burning leaves.