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Cotton fibre

How Cotton fibre is obtained from Cotton plants?

Gathering of Cotton pods

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Ginning

↓

Baling

↓

Preparation before spinning

↓

Carding

↓

Combing

↓

Silvering

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Gathering of cotton pods

When cotton pods get matured and burst, they are picked from the plants and collected. Once they burst and remain on plants cotton fibres get discoloured and dirty.

Ginning

It is a process of separating seeds from the fibres .It may be done either manually or through machines.

Baling

After separating seeds from fibres, now fibres are compressed into bales and then wrapped with jute sacking .Again steel bands are used to bind and now these bales are sent to mills.

Preparation before spinning

In mills bales are opened and cotton fibres are pulled out and beaten to remove dirt or any foreign particles present .After removing dirt cotton fibres are compressed into a sheet called lap.

Carding

The compressed sheet of cotton or lap is passed through a machine called ‘card’ which further removes any kind of foreign particle and make the matted fibres more parallel.

Combing

In this process small fibres are removed and long fibres are laid more parallel and converted into film like sheet of fibres.

Silvering

After carding and combing processes, the film like sheet is drawn into a strand about one inch in diameter called ‘Silver’ which is collected into a can and now is ready for spinning.

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Characteristics of Cotton fibres

Composition

Since cotton is a vegetable fibre so the chief constituent is cellulose. It comprises 88-90percent, water 5-8percent and some other impurities.

Structure

In raw state it looks like tube with sap. But in dried condition fibre becomes flat and twisted and appears as ribbon.

Shrinking

Fabric made from cotton fibres has no elasticity and shrinks if stretched during finishing process.

Hygroscopic moisture

Cotton fibres absorb moisture very readily but do not hold moisture as much as silk or wool fibres.

Effect of moisture and friction

Moisture and friction do not affect cotton fibres adversely means cotton fibres don't get weakened if wet or rubbed.

Heat conductivity

Cotton fibres are good conductor of heat .This is the reason we prefer to wear cotton clothes in Summer season.

Affinity to dyes

Cotton fibres takes in dyes easily than Linen .Common dyes which are used for cotton are mordant colours and Direct or Substantive dyes.

Action of acids

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Strong acid should not be used as it destroys fibres .Further inorganic acid also weaken the fibres so better to clean thoroughly if inorganic acid is used. However cotton fibres are least affected by organic acid.

Action of Alkalies

Cotton fibres are very resistant to Alkalies

Reaction to bleaches

All bleaches can be safely used for white coloured cotton.