# COTTON PRODUCTION AND PROCESSING TECHNOLOGIE

Cotton after production in the field is to undergo a number of downstream processing both mechanical and chemical to yield yarn for manufacture of fabrics. During the removal of cotton from the plant either by mechanical or by hand picking often gets contaminated with leaves, bracts, boll rinds and other plant parts along-with many heavier particles like dust and sand. These impurities are removed prior to ginning of cotton wherein the seeds are separated from the fibre. The cotton after ginning is also subject to post cleaning for removing the contaminants like trash and oil etc. The ginned cotton then pressed to bales for marketing to the spinning mills wherein it is subject to mechanical processing to produce cotton yarn. The spinning operation includes several steps like cleaning, opening, blending, carding, aligning in draw, speed frame, combing and yarn formation. The yarn or the textile then go for chemical treatment and finishing processes for imparting desired properties. In addition the by products from the cotton fields as well as from the textile mills are judiciously utilised to make the cotton production and its utilisation more economic.



**Cotton Farming Practices**

- General Breeding methods and special breeding methods.
- Hybrid Seeds to suit various climates and soils

**Seed Processing**

**Soil Management**

- Management of soil for cotton production according to the soil properties.
- Soil fertility management for augmenting the cotton production
- Methods for cotton production in problem soils.

**Water Management**

**Integrated Nutrient Management**

**Integrated Pest Management (IPM) and Insecticide Resistance Management (IRM)**

**Cotton Diseases and their control**

**Farm Machinery for Cotton Cultivation**

**Ginning and Pressing**

**Mechanical Processing of Cotton (Spinning)**

**Chemical processing of Cotton fabrics**

**Cotton By-Product Utilisation**

- Cottonseed Meal
- Particle Boards from Cotton Plant Stalks
- Binder-less Hard Boards from Cotton Plant Stalks
- Pulp & Paper from Cotton Plant Stalks
- Corrugated Boards from Cotton Plant Stalks
- Bio pulping of Cotton Plant Stalks
- Micro Crystalline Cellulose from Cotton Plant Stalks
- Edible cultivation on Cotton Plant Stalks
- Biogas and Bio-manure from textile mill waste