

Cotton Cultivation Guide

Introduction

Cotton (*Gossypium spp.*) is one of the most important fiber crops globally, providing raw material for the textile industry. It is also a significant cash crop, widely cultivated in tropical and subtropical regions. Cotton farming requires warm temperatures, adequate irrigation, and proper pest management for optimal yields.

Steps of Cultivation

1. Variety Selection

- Choose high-yielding and pest-resistant varieties.
- Popular varieties include Bt Cotton, H-4, MCU-5, and Suvin.

2. Soil Preparation

- Prefers well-drained, deep black soil rich in organic matter with a pH of 6.0–7.5.
- Land should be plowed 2–3 times, followed by harrowing to achieve a fine tilth.
- Apply farmyard manure to improve soil fertility.

3. Sowing and Spacing

- Sowing is done from April to June for the Kharif season.
- Seed rate: 15–25 kg per hectare.
- Spacing: 75–90 cm between rows and 30–45 cm between plants.

4. Irrigation and Water Management

- Requires moderate irrigation, especially during flowering and boll formation.
- Drip irrigation is recommended for efficient water usage.
- Avoid waterlogging, as it can lead to root diseases.

5. Fertilization and Nutrient Management

- Apply nitrogen, phosphorus, and potassium fertilizers as per soil test recommendations.
- Organic fertilizers and biofertilizers help enhance soil health.
- Proper nutrient management ensures higher fiber quality and yield.

6. Weeding and Pest Control

- Regular weeding is required during the initial growth stages.
- **Common pests:** Bollworms, aphids, and whiteflies. Integrated Pest Management (IPM) using biopesticides and resistant varieties is recommended.
- **Common diseases:** Leaf curl virus, root rot, and bacterial blight. Crop rotation and fungicide application help control diseases.

7. Harvesting and Yield

- Cotton is ready for harvest 150–180 days after sowing.
- Harvest when bolls fully open and fibers dry.
- The average yield is 15–30 quintals per hectare, depending on variety and management.

Conclusion

Cotton farming is a profitable and essential agricultural practice with significant economic value. Proper soil preparation, fertilization, irrigation, and pest control measures ensure high fiber quality and better yields, contributing to the textile industry and farmer incomes.

