

Fruit Production Technology - Supervisor Level - 4 (IHT-207)

DURATION - 1 YEAR

COURSE CONTENT

Module 1: Introduction

Scope and Importance of Fruits in India
Prospects of Fruit Market in India

Module 2: Site Selection

Soils and Media
Soil Sampling and Analysis
Soil Reclamation
Soil Sterilization and Solarization
Water Resources and Quality Assertion

Module 3: Nursery Management

Methods of Propagation
Potting and Repotting
Potting Mixture Preparation
Root Trainer Nursery Preparation
Shading
Care and Handling of Nursery Plants
Name of Firms Dealing with Seedling
Selection of Seedlings and their Characteristics

Module 4: Propagation of Fruit Plants

Asexual and Sexual Methods
Propagation by Seed, Cuttings, Budding, Grafting, Layering, Tissue Culture
Seed/Propagule Treatments
Nursery Act, Quarantine Diseases

Module 5: Soil Preparation

Pit/Bed/Ridge Making
Transplanting
Mulching
Basin Preparation

Module 6: Irrigation and Fertigation

Drip Irrigation
Drip Laying
Use of in-line and on-line Drip
Essential Nutrient Elements – Sources, Availability, Functions, Deficiency and Toxicity Symptoms
Critical Limits of Nutrient Elements
Selection of Fertilizers
Calculation of Fertilizer According to Growth Stages
Method of Application

Module 7: Transplanting & Growth

Early Care
Factors Affecting Growth
Role of Growth Regulators in Growth and Flowering
Role of Temperature and Day-length in Flowering
Role of Intercultural Operations

Module 8: Establishment and Management of Orchards

Planting Systems and Planting Densities
Orchard Planning and Layout
Soil and Water Tests
Sources of Genuine Planting Material
Season of Planting

Module 9: Canopy Management

Training and Pruning of Fruit Crops
Principles and Methods in Tree and Vine Crops
High Density Orchards-types and Techniques
Rootstocks and its Influence on Fruit Production

Module 10: Management of Weeds

Weeds - Types and Season of Appearance
Losses Caused by Weeds
Methods of Weed Control - Mechanical, Cultural, Biological and Chemical
Relative Merits and Demerits

Module 11: Management of Diseases and Pests

Important Diseases and Pests in Fruit Crops
Extent of Damage, Symptoms, Control Measures
Use of Chemical, Biological Measures
IPM and Safe Use of Plant Protection Chemicals

Module 12: Post Harvest Management

Fruit Development
Climacteric and Non-Climacteric Fruit
Causes of Spoilage and Control Measures
Post Harvest Treatments for Enhancing Shelf-life
Grading and Packaging
Value Addition
Preservation Methods and Different Products

Module 13: Fruit Production Technology of Specific Crops like - Mango, Banana, Citrus, Grape, Papaya, Sapota, Guava, Pineapple, Avocado, Litchi, Ber, Apple, Pear, Peach and Strawberry

Varieties
Climate and Soil Requirements
Propagation Techniques
Planting Density and Systems
After Care
Training and Pruning
Irrigation Requirement

Nutrient and Weed Management

Use of Growth Regulators

Control of Physiological Disorders

Harvest Indices

Harvesting Methods

Post-Harvest Technology-Grading, Packaging and Storage of the Fruit Crops