

Production Technology of Greenhouse Vegetable Crops - Supervisor Level II (IHT-110)

DURATION - 3 MONTHS

Introduction

Importance, scope and advantages of vegetable production in greenhouse
Classification of vegetable crops
Present scenario of vegetables
Production in greenhouse

Principles of Greenhouse Technology

Greenhouse structure
Classification of greenhouse structures
Green house designs
Location selection
Planning and construction of greenhouses
Construction principles
Construction materials
List of companies
Handling and maintenance

Microclimate and Its Management

Management of light, temperature and humidity
Ventilation/Airflow management
CO₂ enrichment
Selection of crop as per 1 month course

Soil

Types of soil
Soil sterilization, solarization, chemical sterilization, steam sterilization, fumigation
Soil amendments
Soil conservation
Soil reclamation

Nursery Production

Bed Preparation (conventional nursery)
Media and their composition
Plug nursery
Function and criteria
Media sterilization
Media amendments and preparation
Plug tray sterilization, methods of nursery preparation manual/ automation

Ingredients
Chemical supplements
Testing and modifying
Media treatment

Irrigation

Water source, quality and analysis
Soil moisture determination
Estimation of daily water requirement
Distribution systems
Watering nursery crops
Purification of recycled water
Fertigation

Nutrients Management

Role of nutrients
Macro and micronutrients
Deficiency of nutrients
Methods and time of application
Plant nutrition and fertilization
Soil and nutrition management

Insect Pest Management and Disorders

Insect pests and their management
Diseases and their management
Nematodes and their management
Physiological disorders and management

Troubleshooting in Greenhouse

Dusters/sprayers maintenance
Microprocessor controls
Drip and fertigation maintenance
Equipment repair and maintenance

Post Harvest Handling and Storage

Harvesting methods
Grading
Storage
Processing
Packing and transportation

Inventory Management

Plant and equipment inventory

Supplies

Growing Tomato under Greenhouse

Varieties

Environment requirement

Special pre-harvest management like training, pruning

Pollination technique

Management of insects, pests and diseases

Post-harvest management for marketing and export

Growing Capsicum under Greenhouse

Varieties

Environment requirement

Special pre-harvest management like training, pruning

Pollination technique

Management of insects, pests and diseases

Post-harvest management for marketing and export

Growing Cucumber/Gherkin under Greenhouse

Varieties

Environment requirement

Special pre-harvest management like training, pruning

Pollination technique

Management of insects, pests and diseases

Post-harvest management for marketing and export

Record Keeping, Monitoring etc.