Cucumber Production in Greenhouse - Level 3 (IHT-112)

DURATION - 6 Months

Module 1: Introduction to Vegetable Production with Special Reference to Cucumber

Present Status and Prospect
Importance, Scope and Advantages
Classification
Nutritional and Medicinal Value
Scope of Off-season Cultivation

Module 2: Location and Size of Production System

Site Analysis for Protected Cultivation
Construction Principles for Protected Structures
Financial Planning of Protected Cultivation
Identification and Importance of Tools, Implements and Gadgets Used for Farm

Module 3: Principles of Greenhouse Technology for Protected Cultivation

Introduction
Importance, Scope and Advantages
Resent Scenario
Classification of Greenhouse Structures
Green House Designs
Location Selection
Planning and Construction of Greenhouses
Construction Principles
Construction Materials
List of Companies Involved
Management of Light, Temperature and Humidity
Ventilation/Airflow Management
CO_2 Enrichment

Module 4: Water Management

Water Source and Quality and Water Needs of Plants
Detecting Water Deficiencies and Critical Stages of Irrigation
Calculation of Water Usage
Stages of Irrigation
Flood, Furrow Drip Irrigation System
Soil Moisture Measurement
Maintenance of GH Irrigation System
Components of Drip Irrigation
Maintenance of Drip Lines, Valves and Emitters

Module 5: Fertigation and Nutrient Management

Macro and Micro Nutrients and Requirement at Different Stages
Method of Application in Direct Soil
Method of Application through Foliar Application
Formulation of Fertilizers for Basal, Drip and Foliar Application
Technology of Fertigation
Stock Solution

Module 6: Nursery Management
Methods of Propagation
Direct Seeding
Plug Type Nursery Production
Care and Handling of Nursery Plants
Irrigation and Plant Protection
Hardening and Transplanting
Name Firms Dealing with Seedling
Selection of Seedlings and their Characteristics

Module 7: Cucumber Production under Greenhouse
Varieties and Seed Selection
Environment and Substrate Requirements - Mulching
Soil Preparation
Bed Preparation
Transplanting
Intercultural Operations, Training and Pruning
Management of Insect Pests and Diseases
Rodent Management
Physiological Disorders and Management
Harvesting Indices and Harvesting
Post-harvest Management and Marketing
Demonstration in Polyhouse on Crop Culture

Module 8: Post-Harvest Management and Marketing
Economics Computation
Demand and Supply Gap Identification
Identification of Maturity Indices as per Market Demand
Harvesting Methods and Instruments Used
Pre-cooling, Washing, Grading and Packing
Storage Temperature and Humidity Requirements
Marketing Produce Options - Local, Distant and for Export
Benchmark for Export-APEDA Standards
Assignments, Presentation and Project Preparation by Trainee will be Included