



PERTECNCA'S

INDOOR FARMING

TRAINING

BROCHURE



Practical training



Post training assistance

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INDOOR FARMING TRAINING

The Indoor Farming Training program is tailored to educate participants on modern indoor farming techniques, including vertical farming, hydroponics, aquaponics, and controlled environment agriculture (CEA). This course focuses on maximizing space utilization, efficient resource management, and producing high-quality crops in a controlled indoor environment. Ideal for urban farmers, entrepreneurs, and anyone interested in sustainable agriculture innovations.

What you'll learn?

- Fundamentals of indoor farming and its advantages
- Techniques for setting up and managing hydroponic systems
- Understanding and applying vertical farming methods
- Lighting, temperature, and humidity control for optimal plant growth
- Water and nutrient management in indoor farming
- Pest and disease control in controlled environments
- Market opportunities for indoor-grown produce

Course summary:

This training program provides a comprehensive understanding of indoor farming, emphasizing the use of technology and innovation to grow crops in non-traditional environments. Participants will learn to design, implement, and manage indoor farming systems that are efficient, productive, and sustainable.

Key Takeaways:

- In-depth knowledge of indoor farming systems and their components
- Skills in setting up and managing hydroponic and vertical farming systems
- Expertise in controlling environmental factors for optimal plant growth
- Practical experience in nutrient and water management
- Insights into market trends and opportunities for indoor farm products

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Course syllabus:

Module 1: Introduction to Indoor Farming

- Overview of indoor farming and its significance in modern agriculture
- Comparison of indoor farming with traditional and greenhouse farming
- Benefits and challenges of growing crops indoors
- Overview of indoor farming technologies and trends

Module 2: Hydroponics Systems

- Fundamentals of hydroponics and its various methods
- Setting up and managing nutrient film technique (NFT), deep water culture (DWC), and other hydroponic systems
- Preparing and maintaining nutrient solutions
- Understanding pH, EC, and nutrient balance in hydroponics

Module 3: Vertical Farming Techniques

- Principles and benefits of vertical farming
- Designing and constructing vertical farming systems
- Crop selection for vertical farming
- Maximizing space and yield in vertical farms

Module 4: Environmental Control in Indoor Farming

- Importance of lighting, temperature, and humidity control
- Choosing and installing appropriate lighting systems (LED, HPS, etc.)
- Monitoring and adjusting environmental parameters for different crops
- Automation and control systems in indoor farming

Module 5: Water and Nutrient Management

- Water management techniques in indoor farming
- Preparing and adjusting nutrient solutions for optimal plant growth
- Recirculating and non-recirculating systems in indoor farming
- Monitoring water quality and nutrient levels

Module 6: Pest and Disease Management

- Common pests and diseases in indoor farming environments
- Integrated Pest Management (IPM) strategies for indoor farms
- Biological controls and safe chemical treatments
- Preventative measures and best practices for maintaining a pest-free environment

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Module 7: Advanced Indoor Farming Techniques

- Introduction to aquaponics and its integration with hydroponics
- Controlled Environment Agriculture (CEA) and its application in indoor farming
- IoT and smart farming technologies in indoor agriculture
- Research and development in indoor farming innovations

Module 8: Practical Training in Indoor Farming

- Field exercises in setting up hydroponic and vertical farming systems
- Hands-on experience in controlling environmental conditions for crop growth
- Practical sessions in nutrient management and pest control
- Real-time monitoring and adjustment of indoor farming systems

Module 9: Real-Time Projects in Indoor Farming

- Developing a complete indoor farming plan from setup to harvest
- Project on hydroponic and vertical farming system integration
- Market analysis and business planning for indoor-grown produce
- Implementation of automation and control systems in indoor farms

Module 10: Marketing Indoor Farm Products

- Identifying market opportunities for indoor-grown crops
- Branding and marketing strategies for indoor farming businesses
- Connecting with retailers, wholesalers, and direct consumers
- Value addition and packaging for indoor farm products

Module 11: Evaluation and Certification

- Final assessment through practical demonstrations and project presentations
- Evaluation of participants' understanding and application of indoor farming techniques
- Certification of completion, recognizing expertise in indoor farming

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Practical training:

- Hydroponic System Setup: Hands-on training in designing and constructing a hydroponic system.
- Vertical Farming Techniques: Practical exercises in implementing vertical farming strategies.
- Environmental Control: Real-time monitoring and adjustment of lighting, temperature, and humidity in indoor farms.
- Water and Nutrient Management: Training in preparing and administering nutrient solutions for different crops.
- Pest Management: Practical sessions on identifying and managing pests in controlled environments.
- Market Linkages: Guidance on marketing strategies for indoor-grown produce.

Career scope:

Upon completing the Indoor farming training course, graduates can explore career opportunities in various sectors, including:

- Indoor Farm Manager
- Hydroponics Technician
- Vertical Farming Consultant
- Controlled Environment Agriculture Specialist
- Urban Farming Entrepreneur
- Agri-tech Product Developer
- Sustainable Agriculture Educator
- Indoor Crop Production Advisor
- Agribusiness Marketing Specialist
- Indoor Farming Instructor

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