



IoT based for managing temperature, relative humidity, nutrient and pH levels

Key Features

1. Wifi enabled farm
2. RO System with capacity 250 LPH
3. IoT based mobile application / web access for climatic control – Temperature & Relative humidity – enabled with managing co-axial fan, cellulose pad for cooling and fogging system
4. IoT based mobile application / web access for nutrient management – Nutrient dosing system – enabled with monitoring and remote access for managing nutrient and pH levels
5. Data logging facilities

Advantages of Hydroponics Farm

Key Features

1. Space saver – Ability to grow more than 1400 plants within farm of 160 sqm.
2. Water conservation – Only 10% of water consumption when compared to traditional farming techniques
3. Lesser requirement for pesticides
4. Year-round climatic control
5. Effective and efficient nutrient control
6. Higher yield per sqm.



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IoT Assisted, Automated IT Driven,
 Controlled environment Vertical
 Farm - Education Module with
 IoT Interventions,
 Data Rendering & Downloads

Executed by



Directorate of Agri. Business Development
 Tamil Nadu Agricultural University
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IoT Assisted, IT Driven, Controlled environment Vertical Farm

Key Features

1. Aerodynamic design saw-tooth polyhouse structure conforming with Indian Standards (IS:1239/2014) (IS:15827/2009)
2. Co-axial fan, Cellulose Pad for Cooling, Fogging system
3. Vertical NFT System – 2 Nos. – Each system having capacity upto 456 plants
4. Dutch Bucket System with minimum 100 Nos. of plant capacity
5. Deep Water Culture with 320 plants
6. RO System with capacity 250 LPH
7. IoT based digital controller for operating fan & cooling pad to manage temperature and relative humidity
8. IoT based automatic nutrient dosing system to manage nutrient and pH levels

Polyhouse structure with Co-axial fan, Cellulose Pad for Cooling, Fogging system

Key Features

1. Aerodynamic saw-tooth design to withstand wind speeds upto 80 km/hr.
2. Area 160 sqm : 20m x 8m
3. Entrance room 8 sqm : 4m x 2m
4. Interlocking paver blocks of 60 mm thickness covering the full area
5. Co axial fan 2 Nos.
6. Cellulose pad of 4" thickness
7. Fogging system



Fully Automatic Hydroponics System

Key Features

1. Vertical NFT system – Two system each system having capacity of 456 plants (20ft x 6ft x 6ft) with loft tank capacity of 225 litres and a submersible motor.
2. Dutch bucket system –100 no of bucket with a size of (30cm(L) x 25cm (W)x 22 cm (H) with a loft tank capacity of 225 litres and a submersible motor, which has 100no of plant capacity (bigger crops).
3. DWC Deep Water Culture system – DWC(20'x4') which has a capacity of growing 320 no of plants.

