Mushroom House

5D Agriculture Solutions

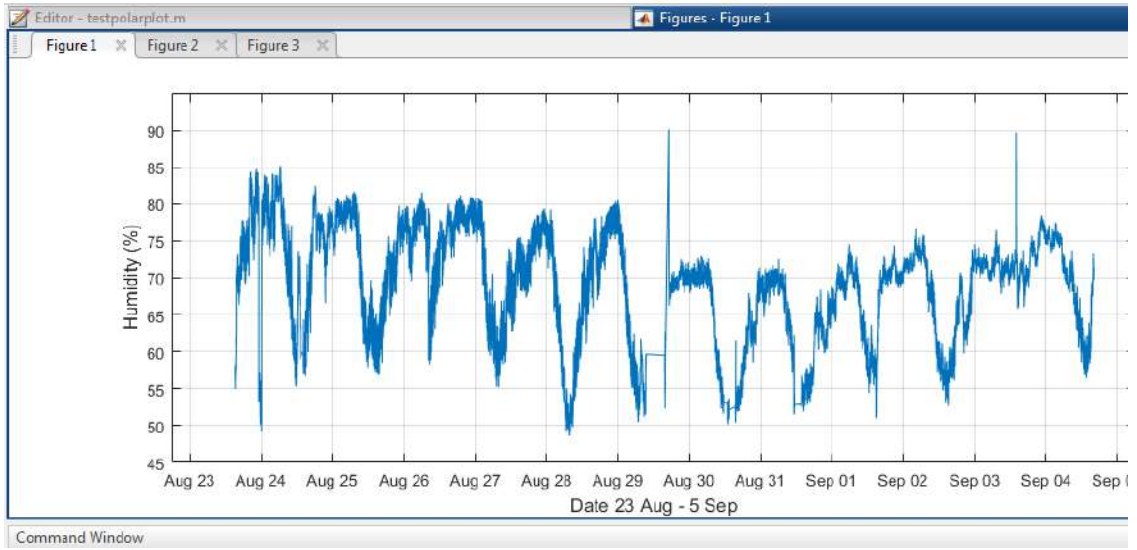
Mushroom House

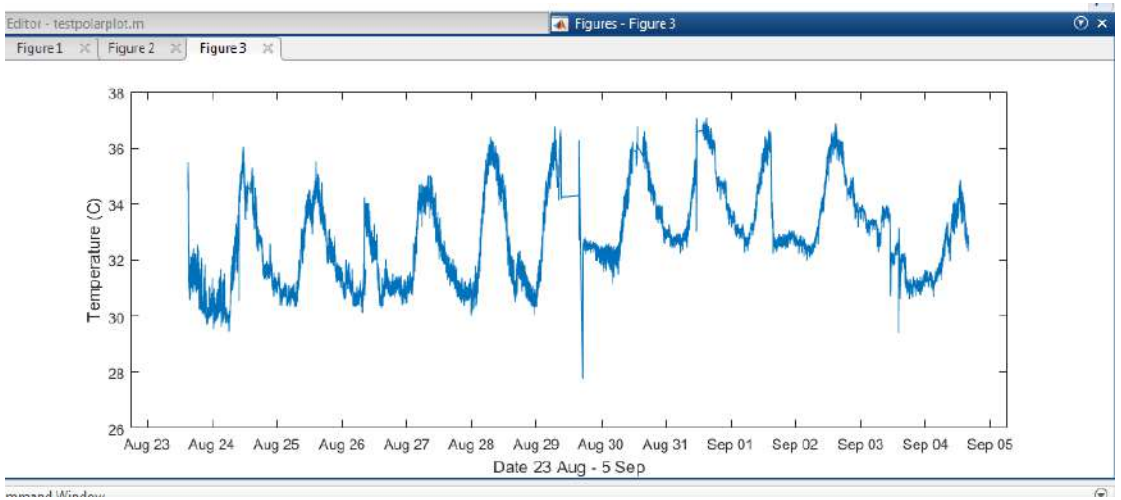
We have developed an automation mushroom house. We utilize technology into the mushroom house to optimize the mushroom growth.

The Mushroom House is included the followings:

1. **Strawhouse (25-50 m2)**
2. **Shelf and Humidity System**
3. **Electronics and Sensors**
4. **Software**

Using IOT technology





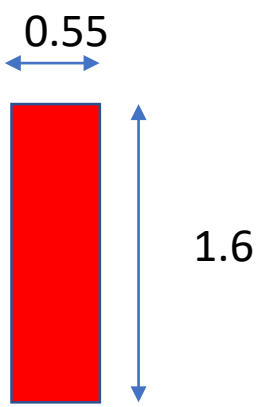
- We use sensor to accurately control and provide the desired level of humidity.
- We use IOT to monitor and control the system remotely

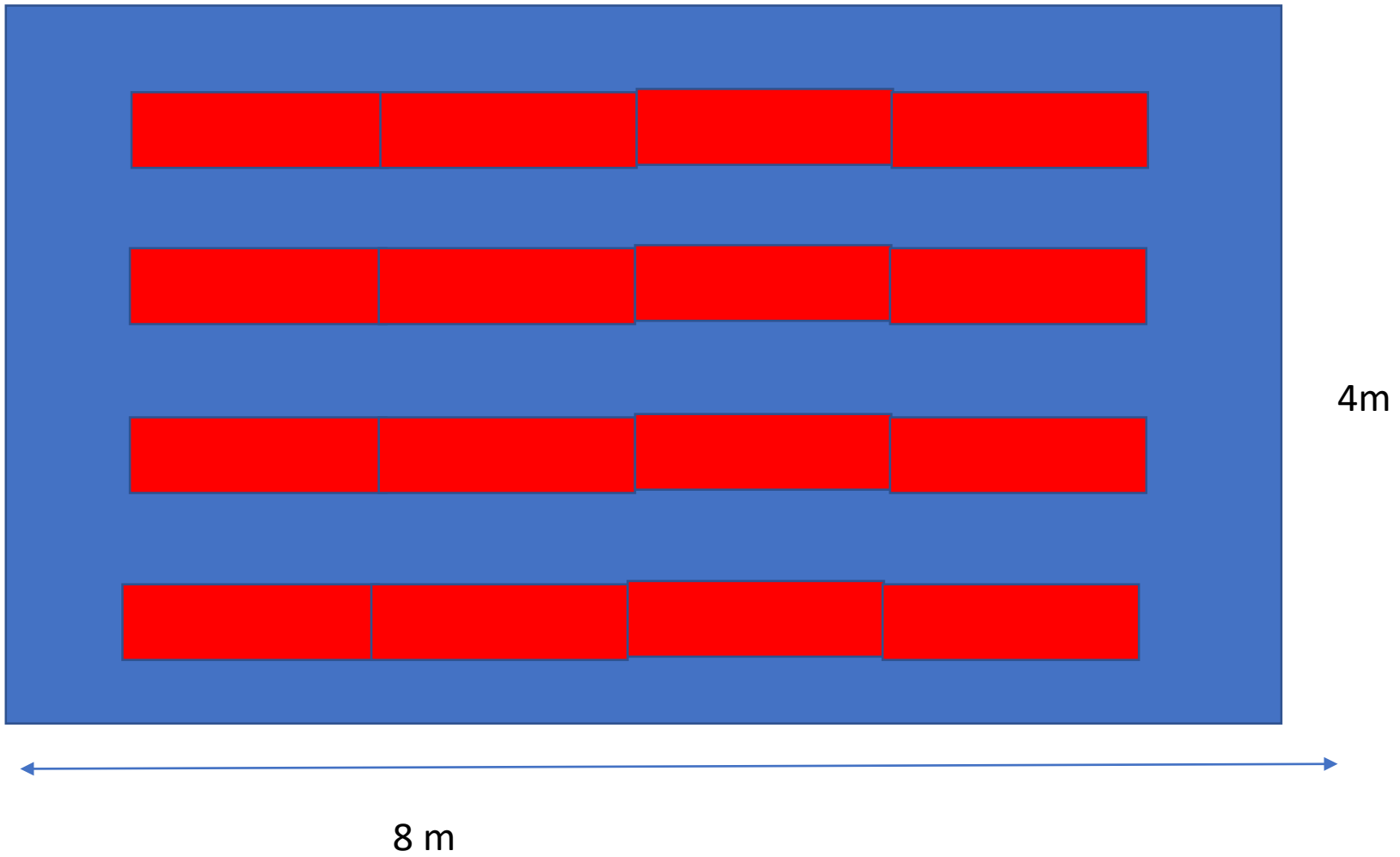
I. Strawhouse

- Strawhouse:
  - Roofing material: Coconut Leaves
  - Housing frame: wood
  - Area: 35-50m2
- Floor:
  - Material: thin concrete
  - Area: 35-50m2

Inside of a $32m^2$ (8x4m) mushroom house

- 4 rows, each row has 4 shelfs
- Each shelf has 5 levels with 2 sides.
- Each level can hold 40 mushroom bags on each side
- Each shelf can hold 40*5*2=400 phoi
- Mushroom house can hold 6400 mushroom bags





II. Shelf and Humidity System

- Pipe:
  - Material: PVC
  - Size: 35-45m.
- Shelf:
  - Material: metal
  - Size: 55-65m

III. Electronics and Sensors

- Ultrasound Generator for mist
- Plasma Filter (optional)
- Regular Filters
- Electronic Controller
- Sensors

IV. Software

- *IOT system to monitor and control remotely.*

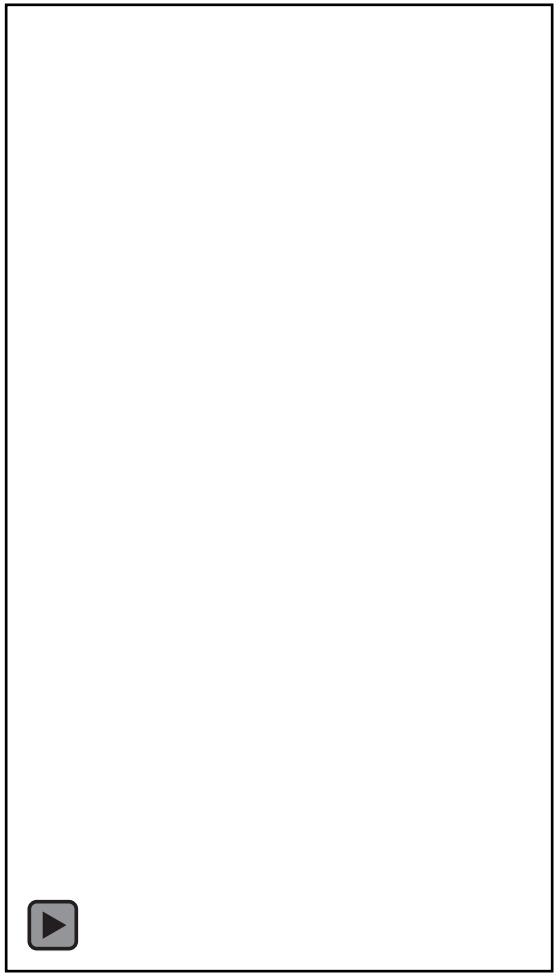
V. Time to complete the construction

- **Schedule for completion.**
  1. Strawhouse. 1-2 week
  2. Frame – Humidity System.
     1. Personnel: 3 person
     2. Time for completion: 1 week.
  3. Installation Electronics and Sensors
     1. Personnel: 1 person
     2. Time for completion: 1 week.
  4. Software – Tesing
     1. Personnel: 1 person
     2. Time for completion: 2 days.
  5. Support and trainer for the first harvest
     1. Personnel: 1 person
     2. Time for completion: 2 weeks.

Total time to complete the project: 3 weeks

V. Estimated Cost

- **Estimated Cost.**
  1. Straw House. ~ 1000USD
     1. Concrete floor
     2. Coconut leaves roof
     3. Plastic to keep the humidity
  2. Frame and Humidity System ~ 2000USD
     1. Water tank of 300 liters
     2. 16 metal mushroom shelfs
     3. Humidity pipe
  3. Electronics and Sensors~ 1800USD
     1. Electronics Controller Chip
     2. Sensors (humidity and temperature)
     3. Ultrasonic Generator
     4. Water Filter
     5. Plasma Filter (optional 1800USD, only if clean water is not available)
  4. Software: 500USD
  5. 6400 mushroom bags: 1200USD
  6. Support and Trainer for 1 season: 2000USD
  7. Tổng Cộng: 8500USD

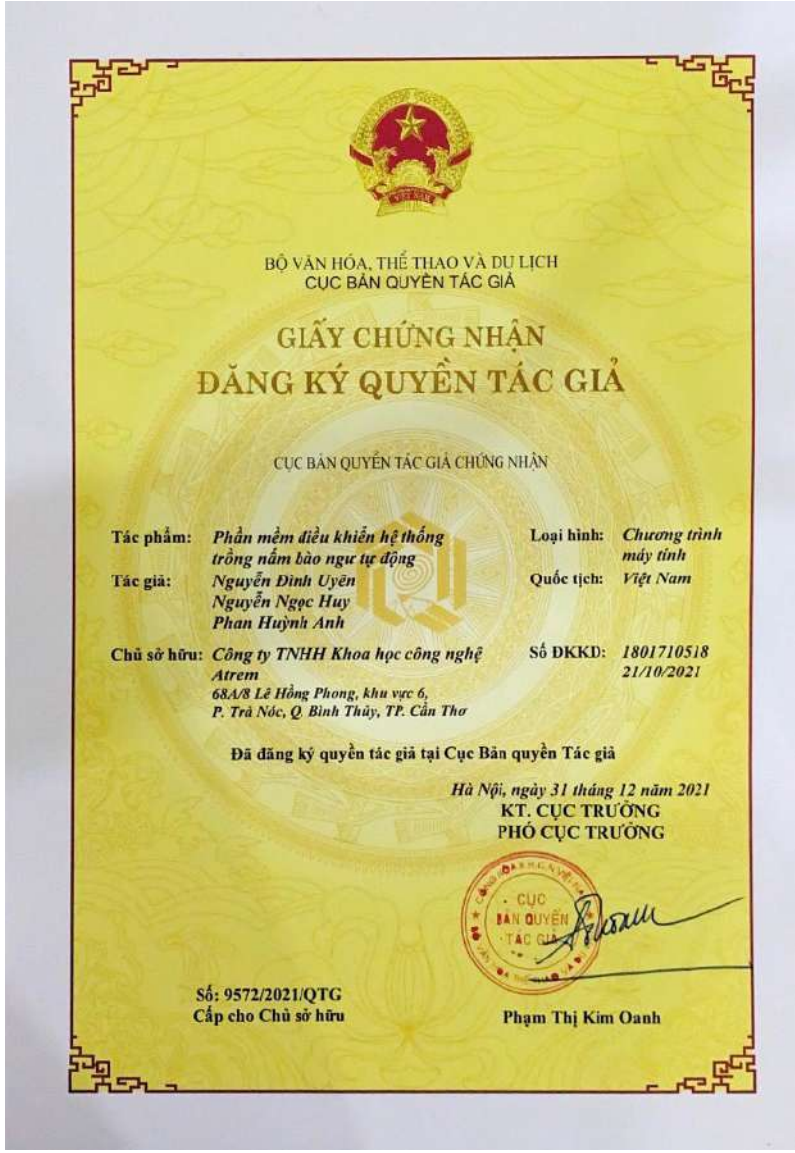


Revenue 1 season (3 months=1 season)

- 6,400 mushroom bags (4k VND) = 25tr
- Each season, 1 mushroom bag produces 200-300 gram mushroom
- 6,400 bags produce 1300-2000kg mushroom
- Market price for 1kg mushroom = 45k VND, 1 season = 60-90tr
- Revenue 1 season(3 months) = 90-25=75tr

Mushroom Bag

We have the copy right to our software.



BỘ VĂN HÓA, THỂ THAO VÀ DU LỊCH
CỤC BẢN QUYỀN TÁC GIẢ

GIẤY CHỨNG NHẬN
ĐĂNG KÝ QUYỀN TÁC GIẢ

CỤC BẢN QUYỀN TÁC GIẢ CHỨNG NHẬN

Tác phẩm: *Phần mềm điều khiển hệ thống trồng nấm bào ngư tự động*
Loại hình: *Chương trình máy tính*
Tác giả: *Nguyễn Đình Uyên*
Nguyễn Ngọc Huy
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21/10/2021

Đã đăng ký quyền tác giả tại Cục Bản quyền Tác giả

Hà Nội, ngày 31 tháng 12 năm 2021
KT. CỤC TRƯỞNG
PHÓ CỤC TRƯỞNG

CỤC BẢN QUYỀN TÁC GIẢ

Số: 9572/2021/QTG
Cấp cho Chủ sở hữu

Phạm Thị Kim Oanh

Abalone Mushroom from our farm.