# Title: Shanghai Academy in Agriculture Science



# Hello!

# We are from Group 4

We are here because we would like to give presentations. Group member

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# Shanghai

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#### Introduction: Shanghai Academy of Agriculture Science

- Promote production and quality of crops
- Biological pest control
- Digital agriculture engineering
- Edible Fungi Institution
- Agriculture & Environment



# Case 1:River water ecosystem restoration demonstration

**Background** : In the procession of agriculture production, the remains of fertilizers and pesticides would come into the river with water flow, causing damage to the river ecology

Aim : To cut down the pollution load from the farmland and rain wash



## Case 2 : Wetland carbon and nitrogen cycle and research on GHG emission characteristics

**Background** : The wetlands are called "the kidney of the world" for its ability to purify.And It also play an important influence on carbon and nitrogen circyle.

#### **Content of research :**

- Evaluate the water purification effect of various emergent aquatic plants
- Explain the GHG emission characteristics of various emergent plants
- Determining parameters related to water purification and GHG emissions from emergent plants



#### Case 3 Ecological Interception Process of Farmland Run-off Pollution

**Object of Research**: The process of interception and purification

#### **Research Emphasis:**

Improve the efficiency of ecological ditches Improve the impact resistance of the whole system

## Purpose of Research:

Get the parameters of engineering design and operation (The best hydraulic retention time & volumetric loading)

#### **Case 4 Comprehensive Experimental Area**

The glass greenhouse covers an area of 2,300 square meters and has more than 100 simulated pools of different specifications.

There is a 500-square-meter Area equipped with equipment for heating water, soil and gas separately, which can basically meet the conditions of the annual research.









## Comparision between Sustainable Argriculture site of Shanghai and Malaysia

# URBAN AGRICULTURE IN MINHANG

- Minhang is one of Shanghai's 18 urban district and the city's second largest economic entity.
- Has well developed traditional manufacturing and hi-tech industry.
- Location : in the centre of Shanghai Municipality
- Farmers in Minhang generate an agriculture output value of 70.5 million USD per year

# HOW URBAN AGRICULTURE WERE DEVELOP?

- MPAP(Multi-stakeholder Policy Development and Action Planning) programme were introduced to help district government identify stakeholder and encourage them to involve in the development of urban agriculture
- Various training courses on agricultural planning and management were organised
- Up to 8000 cooperative farmers received technical training.



# 孙桥现代农业实践区Sunqiao Urban Agriculture District

#### Location

Located between Shanghai's main international airport and city center



#### Idea

-Ideal context for vertical farming by hydroponic and aquaponics growing system Educates generations of the children where the food comes from







# **Vertical Farming**

### **Advantages of vertical farming**

- -better way to produce crop and it grows organically so that the plants can free from pesticides
- -vertical farm in inner city can ensure citizen easily to get the food
- -the crop grow within the adjustable parameter to maintain optimum growing condition which enable extensive crop suitability

# Malaysia



## **Sustainable Agriculture in Malaysia Promoting Production of Palm Oil**







Malaysia was the first country to produce sustainable oil, and now the country is strengthening its sustainability commitment with its nationwide Malaysian Sustainable Palm Oil (MSPO) certification program.

- Palm oil grows in tropical environments located in southeast Asia that has that ideal climate.
- People consume more palm oil than any other vegetable oil and it is found as an ingredient in products ranging from soap to bread.
- However, when palm oil is produced sustainably, the environmental harms are minimized.
- While some countries use destructive farming practices such as clearing forests to grow palm oil, Malaysia is a model for sustainable agriculture.



