The Exploration and Application of Urban Agriculture in China

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1. WHO WE ARE

2. WHAT WE NEED

3. WELCOME TO OUR PARK
About IEDA

Beijing IEDA Protected Horticulture Co., Ltd.
Beijing IEDA Protected Horticulture Co., Ltd. is a high-tech agricultural company under CAAS. Working on protected horticulture tech research, promotion, application and agriculture park design.
What we do

• Vegetable cultivation tech.
• Plant factory design and construction
• Urban horticulture
• Home gardening
• Agriculture park design
• National Agricultural Science & Technology Demonstration Park management
• Professional training
Since 2002, we have undertaken over 100 projects throughout the whole country, including National Science and Technology Park Planning, Sight-seeing Greenhouse Design and Construction, Plant Factory Construction, etc. Our techniques have been popularized to the units across the country in excess of 700.
Development and application of the technical points of the Vertical farming
Key Technical Breakthrough of Plant Factory

Key Tech Break through

- Digital control
- LED Source
- Remote control
- Vertical Hydroponics
- Environment control
• Developed more than 20 Multi-layers vertical Hydroponics system, greatly improved space utilization.

**Breakthrough 1**
—Vertical Cultivation

- Plant factory
- Field cultivation

Difference of two cultivation methods in unit area

land ratio improve to 20
Breakthrough 2

—LED Artificial Light For Plant Growth

Planting leafy vegetable with LED

Application of LED in seedling

Application of LED in tissue culture
Breakthrough 3
— Environmental Control

Control system → Model → Data Acquisition System → Dynamic Database

Measured value → compare

Simulations

Number of days analyzed: 7
Number of alarms: 4

Stress Detector #17 on Duty!

SSRR

9:00-12:00     Air VPD > 2 kPa
12:00-15:00   Leaf T  > 34°C
Air VPD > 4 kPa
15:00-16:00 Test #1 negative
Breakthrough 4
—Remote Control

- Realize online management and remote monitoring to control the vegetables growth everywhere, with mobile phones, laptops, PDAs and other terminals, through the network transmission system.
Nitrogen interruption before harvest

Breakthrough 6

Energy-saving environmental control technology

Solar energy power + LED + Plant factory
Plant factory for fungus production
Mobile Plant Factory
Product Line of Home Digital Plant Factory

Angel-Garden

E-Garden
The First Low-carbon Intelligent Plant Factory in the world

(Shanghai EXPO, 2010)
Urban Horticulture
IEDA was the first company working on the research and technology promotion in urban protected horticulture field. So far, IEDA has completed over 100 projects home and abroad. Our business covers planning & design, project construction, supporting products and other services related to agricultural parks and greenhouse parks.
(1) Urban Horticulture - Vertical Hydroponics Cultivation
(2) Urban Horticulture – Potato Trees

Hanged Tomatoes: Technical innovation, definitely changed the traditional cultivation mode of tomatoes, the plant life-span reaches over 5 years, the yield of single plant achieves over 1 ton.
(3) Urban Horticulture – Greenhouse Park
Top Exhibition Platform of Agricultural Technologies

NATIONAL AGRICULTURAL SCIENCE & TECHNOLOGY DEMONSTRATION PARK
Overview

• Approved by the Ministry of Agriculture in China in 2009

• Cover land area 4.2 hectares

• A platform for research achievements demonstration, communication, training, guiding

• Technologies promotion and application
Functional zoning

- Floral Hall
- Tropical fruit tree hall
- Artificial light plant factory
- Mushroom factory
- Solar light plant factory
- Preface hall
- Leafy vegetable factory
- Fruit vegetables factory
- Urban horticulture hall
- Green innovations
Green gardening technologies are blended in city life flawlessly here. We construct a creative green space, where is full of unique agricultural innovative products.
WHAT WE NEED

Cooperation Opportunities

Vertical Farming
As high-rise buildings people live, Vertical farming will be the place crops and vegetables grow in future. So we can call it Skyscraper Agriculture. Agriculture production activities now in fields will be completed in Multi-dimensional space. It will be a high efficient production and high-yield systems, which simulate the biological growth environment.
Urban Vertical Farming
Challenges we met

How to enter the developed urban area?

How to suit the new developing urban area?
This is an international high-end platform for agriculture exhibition, communication and training. We aim to create a base for international agriculture cooperation and build a bridge for technologies transformation.

WELCOME TO VISIT US!

ONLY 10 MIN DRIVE FROM HERE
Beijing IEDA Protected Horticulture Co., Ltd.

Thank You