



Youth Entrepreneurship / Farmer / Students etc.  
For Effective smart farm education

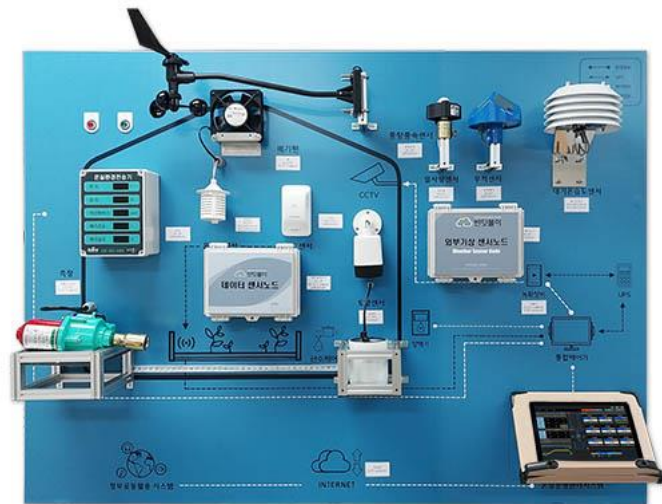
## SmartFarm Educational Simulator

Naretrends Inc.,



# Smart farm educational simulator + After service edu

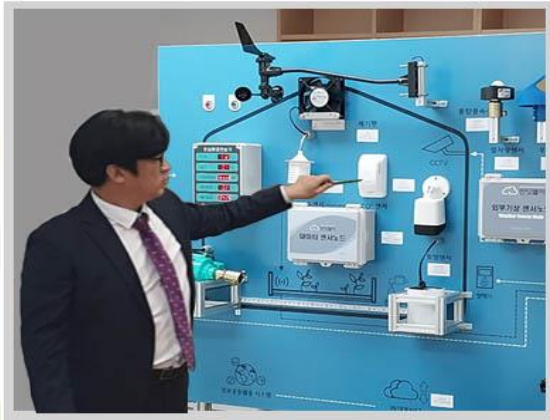
No more listening to explanations in the greenhouse or teaching through PPT!!



Teaching smart farm in a greenhouse was challenging.  
Did you use PPT or video for teaching?  
With the smart farm simulator, you can learn while practicing.

# Easy & Intuitive smart farm simulator

It is composed of sensors and equipment used in actual greenhouses to help students or users who want to learn about smart farms easily and clearly understand, and through an on-site tablet, they can directly operate and use it without worrying about crop damage or equipment failure. It works great.



# Smart farm simulator main features



*Switch, fan, irrigation control (automatic/manual)*

*Move freely with bottom wheels*

*Just turn on the power  
and use it right away without any settings.*

*Tablet and smartphone app support*

*Wiring and panel circuit configuration training available*

# Main components of smart farm simulator



Front

## Sensor

External weather: temperature, humidity, wind direction, wind speed, solar radiation, cold rain + sensor node  
Greenhouse environment: temperature, humidity, CO2, soil (ground temperature/humidity/EC) + sensor node

## Driving device

Actual connection of switch motor  
Exhaust fan: PC fan  
The irrigation valve is implemented with LED.

## Data device

Greenhouse environment data indicator  
Tablet (operating terminal)

▼ Rear interior view (single door)



Rear (Inside)

## Control device

Environmental control device (equipped with automatic control algorithm) + coding

## AS Training Devices

Essential troubleshooting methods to know

## Integrated operation server (optional)


Integrated server type provides data storage and web-based control program

# Specifications & components



*Basic package configuration  
 (specification changes are negotiated)*

**W. 1,581 x H. 1,900 x D. 650 (excluding wheels)**

<p>Wind direction, Wind speed</p> 	<p>Temperature, Humidity</p> 	<p>Solar radiation</p> 	<p>Rain detection</p> 
<p>Temperature, Humidity</p> 	<p>CO2</p> 	<p>Zeon, Humidity, EC</p> 	<p>IP camera</p> 
<p>Sensor node (2ea)</p> 	<p>Router</p> 	<p>Data indicator</p> 	<p>Tablet stand</p> 
<p>Blowing motor</p> 	<p>Fan (small)</p> 	<p>LED (Irrigation implementation)</p> 	<p>Tablet (phone)                      Negotiation upon quotation</p>

- Required for internal wiring and circuit training
- Circuit diagram attached

# Introduction to operating programs + API + Basic coding source

## 1. Mobile APP type



## 2. Web method (server type)

Manual control and automatic control function  
Includes open/close control, fan control, and irrigation control

Automatic control algorithm is more precise and complex  
Includes its own WEB/DB server to store sensor/control/status data



# Delivery example

*Incheon Agricultural Technology Center*



*Yangyang-gun Agricultural Technology Center  
Training Center*



*Namseoul University  
Smart Farm Department*



**Russian** universities, as well as domestic technical training institutions, have already been provided.

**Malaysian** and **Cambodian** educational institutions have shown interest in a simulator

*Chuvash University, Russia*

*Hongcheon Agricultural Technology Center*

*Sangju Agricultural Technology Center*

*Incheon City Agricultural Technology Center  
Training Director*

*Jeju East Agricultural Technology Center*



# The educational effects of a smart farm simulator

1. Coding training available using Python and Linux
2. This kind of coding increases students' interest in smart farms and increases their interest in agriculture.
3. In the future, these coding skills and AS skills will be needed for the localization of smart farms
4. Such training can create professional jobs for young people.





# Thank you

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**Nare**

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