



AGRIWEATHER: BRIDGE THE GAP TO FUTURE FARMING



蜂巢數據科技股份有限公司
Beehive Data Technology Co., Ltd.

About Beehive Data Technology



Hardware & Software Development

Field Sensor/Weather Station/Time-lapse
Agricultural Data Platform



Agricultural Data Application

Crop Stress Notification
Crop Stage/Harvest Day
Prediction



Data Analysis Research

Interdisciplinary Research
Data Visualization

農業拚外銷！預測產期減少損失 新創團隊科技助攻



TVBS Media In-depth Coverage
2019.03

不再只看天吃飯！阿龜微氣候用資料科學看科技創造農業革命



Meet Media In-depth Coverage
2019.03



Japan News JACOM
2019.03

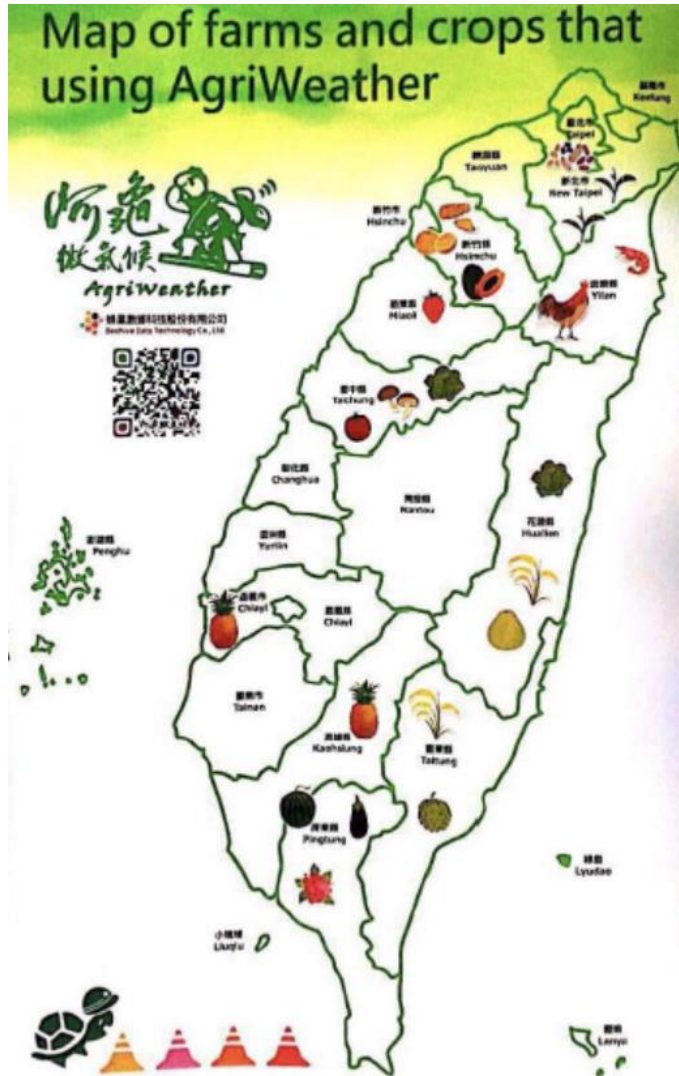


Silicon Valley Exchange Program
2018.08



CommonWealth Magazine
2019.03

More than 70 farms are using our system



70+
farms

20+
Crops

Green House
and Outdoor Field

Stock / Crop
Farming

Work flow

Problem
Define

Find the Low-Nitrate
vegetables
production method

Experiment
Design

3 Greenhouses and 1
outdoor field. 8
round experiment.

4 field * 8 round
=32 samples

Equipment
Incorporate

Device that collects
data of sunshine
intensity,
temperature,
humidity and Nitrate.

Data
Collect

Real-time monitoring
the collection of
necessary data.

Analysis
and
Apply

Form hypothesis
Make suggestions
Verify hypothesis
Make change

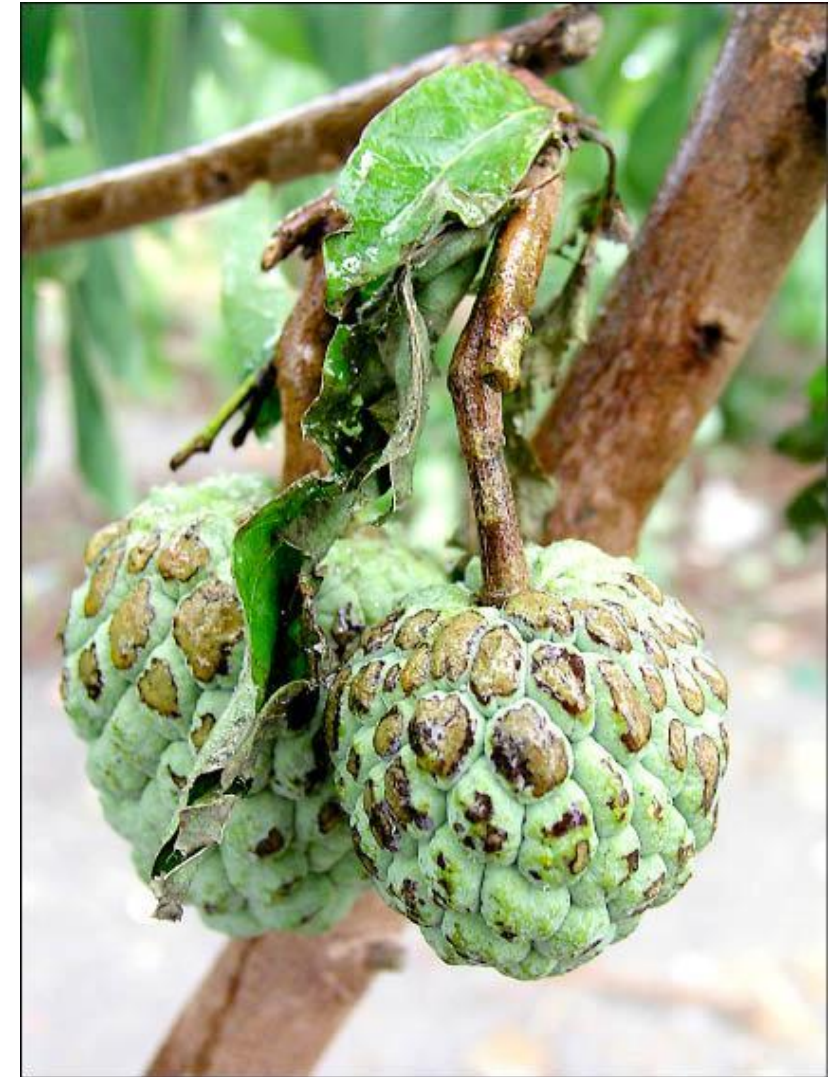
Rice blast



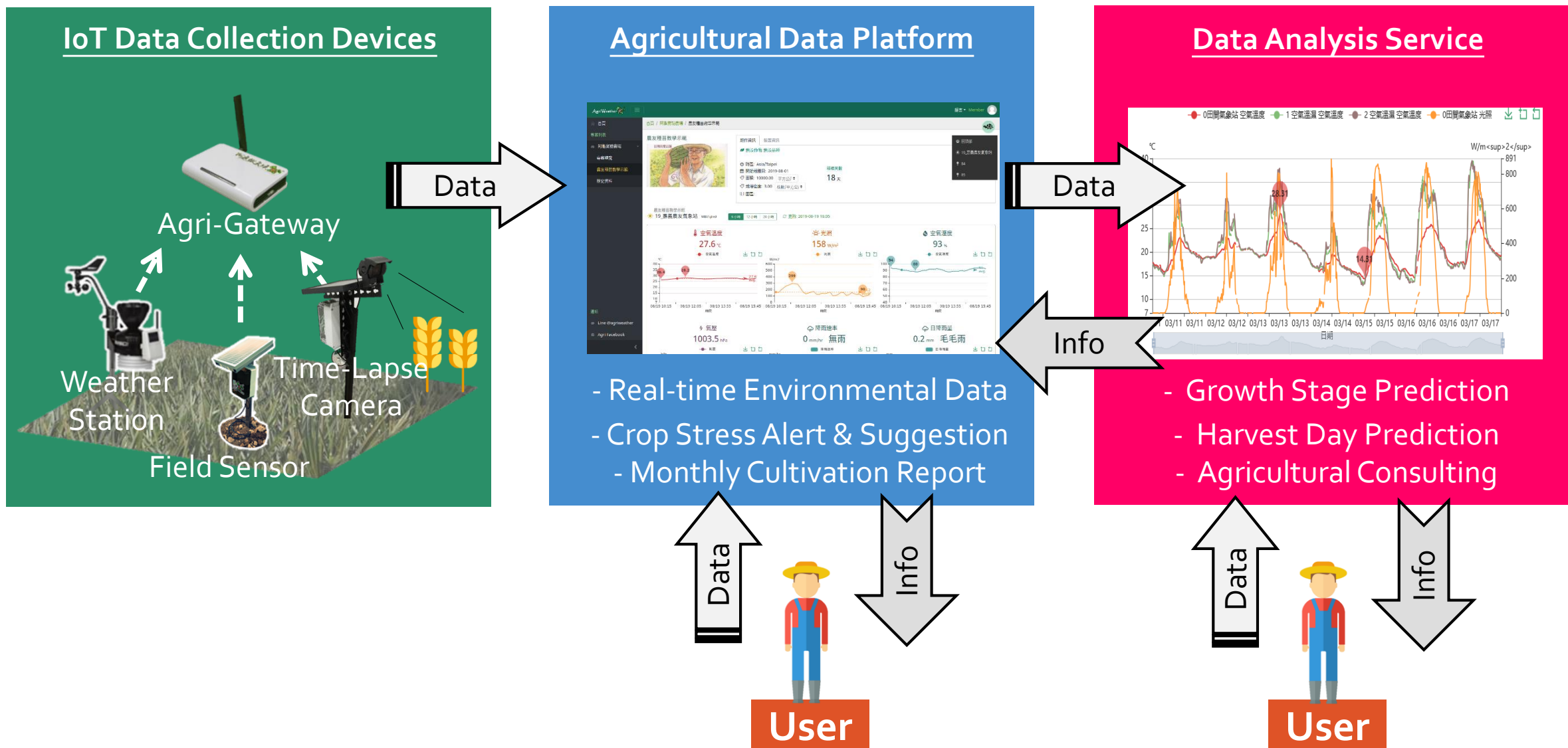
- Large temperature difference between day and night
- High humidity
- High nitrogen
- Poor ventilation



- High temperature
- Low Humidity
- Temperature surge
- Humidity drop



What AgriWeather is doing?



IoT Data Collection Devices:

Product Introduction – Field Sensor



Solar Panel

Provides electricity by absorbing sunlight. Cordless self-contained device that can be easily installed in the field.

Main Component

Uses waterproof case with rechargeable battery & LoRa wireless data communication module.

Soil Sensor Component

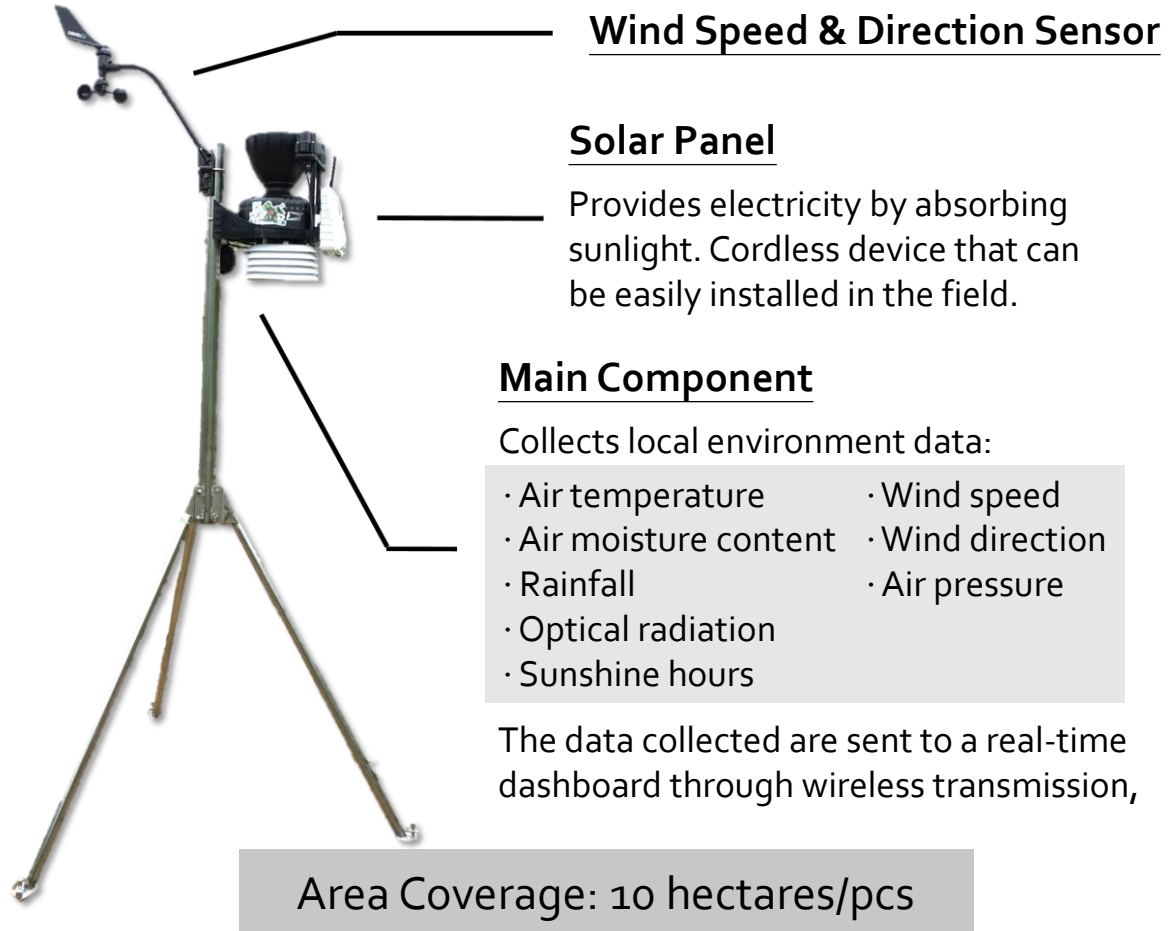
Collects field data:

- Soil Temperature
- Soil Moisture
- Electrical Conductivity
- pH Value (Optional)

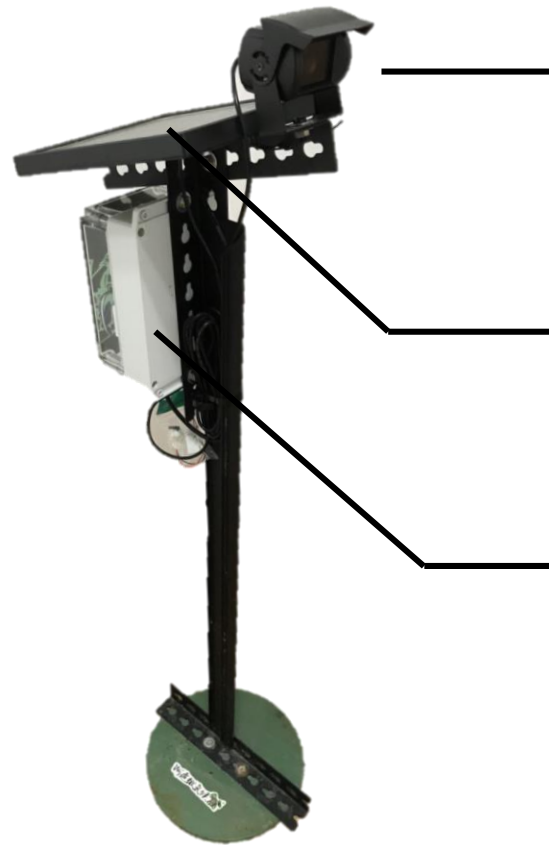
Average Demand: 2-3 pcs/hectare



Product Introduction – Weather Station



Product Introduction – Time-Lapse Camera



Waterproof Camera

Time-lapse interval can be adjusted to accommodate each field.
(need to consider data plan used)

Solar Panel

Provides electricity by absorbing sunlight. Cordless self-contained device that can be easily installed in the field.

Main Component

Uses waterproof case with rechargeable battery & LoRa wireless data communication module.

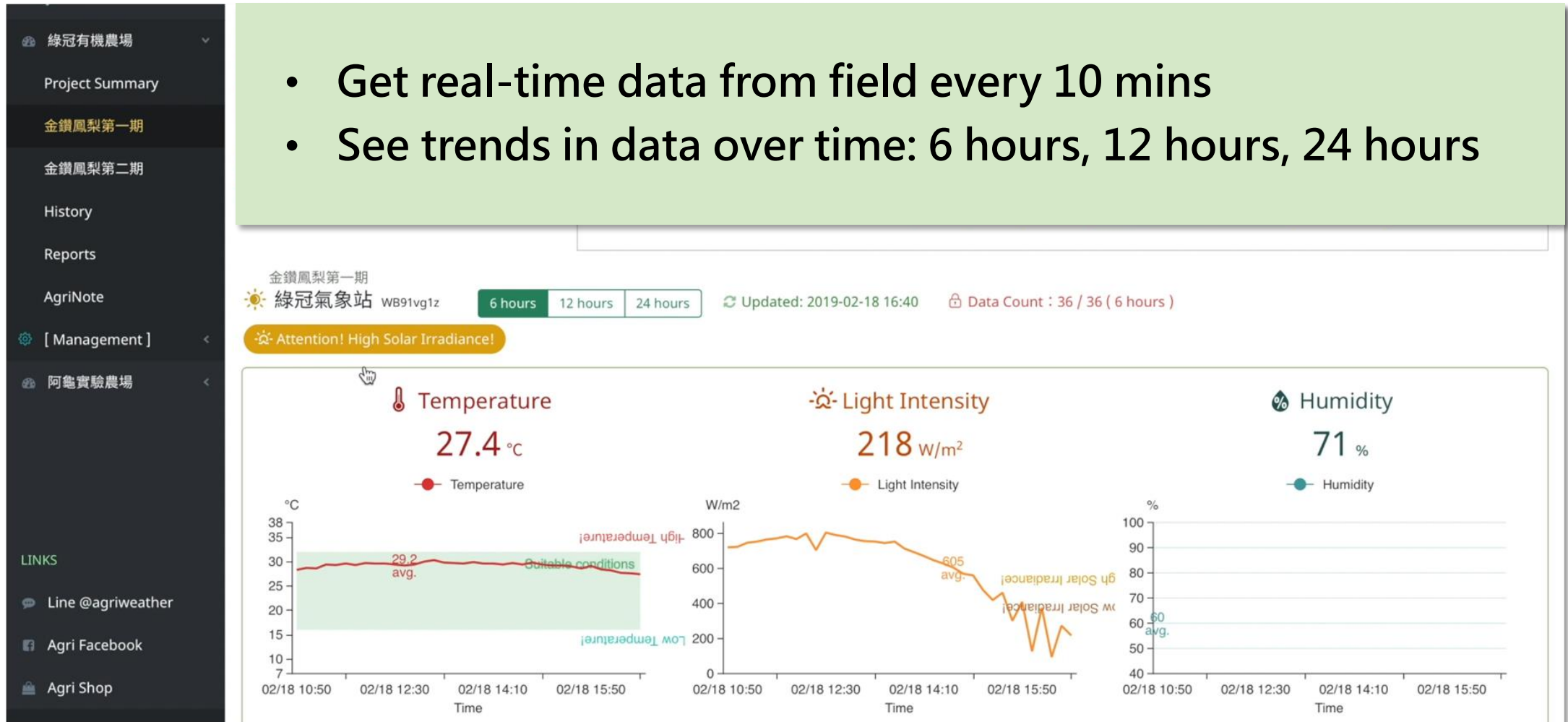


Agricultural Data Platform:

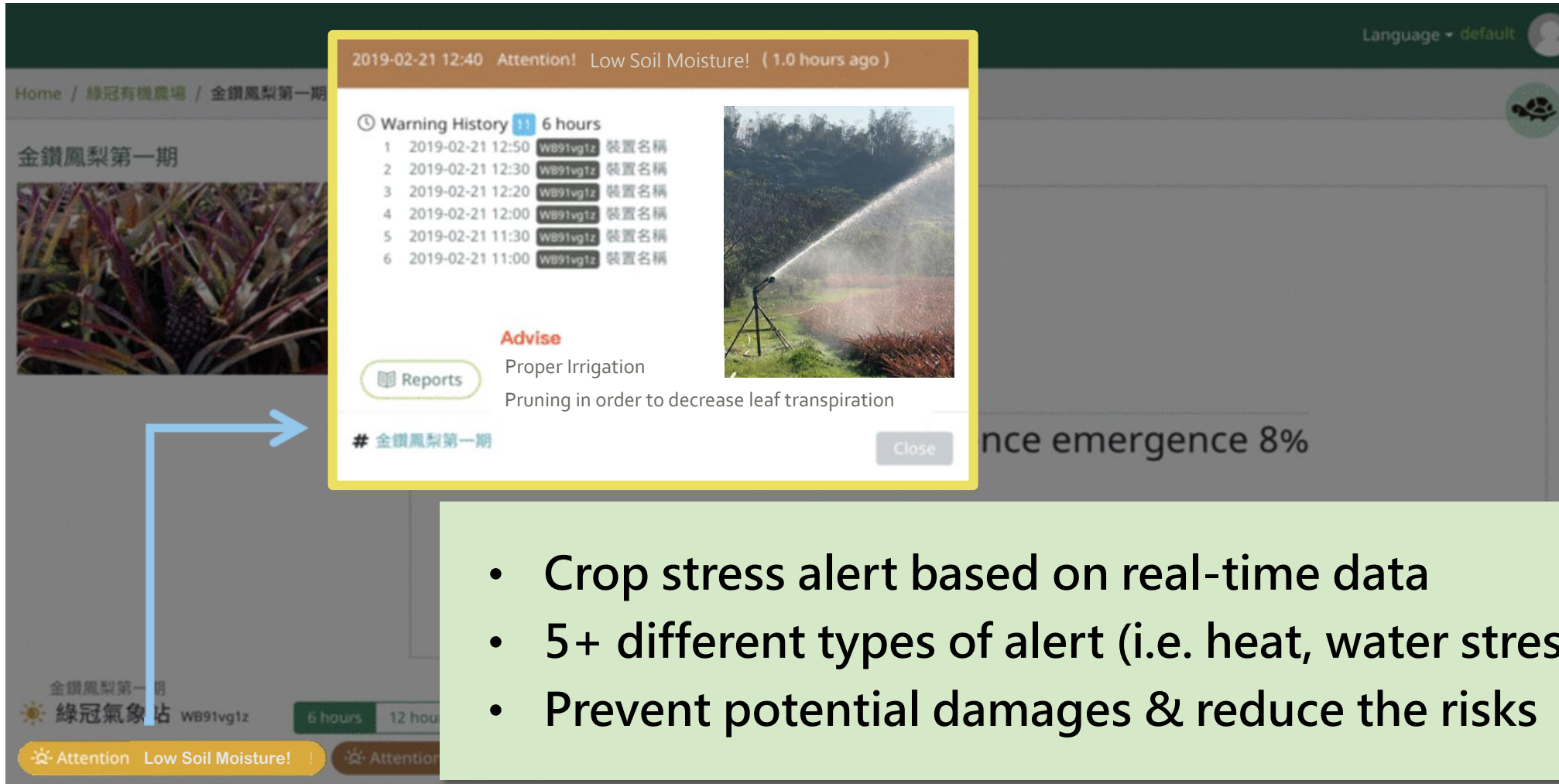
AgriWeather Cloud

Real-time Environmental Data

- Get real-time data from field every 10 mins
- See trends in data over time: 6 hours, 12 hours, 24 hours



Crop Stress Alert & Suggestion




2019-02-21 12:40 Attention! Low Soil Moisture! (1.0 hours ago)

🕒 Warning History 6 hours

1	2019-02-21 12:50	WB91vg12	裝置名稱
2	2019-02-21 12:30	WB91vg12	裝置名稱
3	2019-02-21 12:20	WB91vg12	裝置名稱
4	2019-02-21 12:00	WB91vg12	裝置名稱
5	2019-02-21 11:30	WB91vg12	裝置名稱
6	2019-02-21 11:00	WB91vg12	裝置名稱

Advise

Proper Irrigation
Pruning in order to decrease leaf transpiration

 Reports

金鑽鳳梨第一期

Close

nce emergence 8%

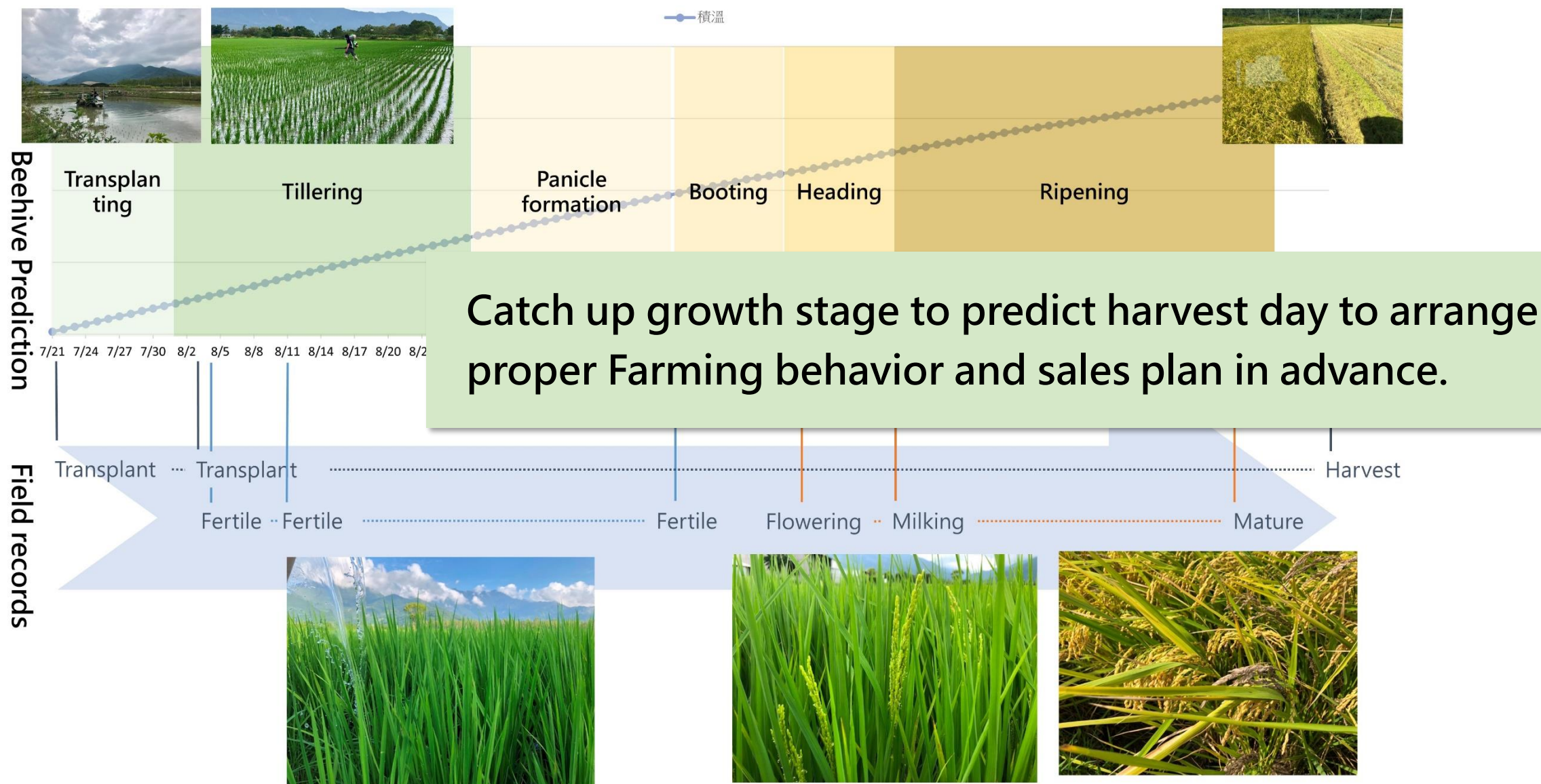
金鑽鳳梨第一期
綠冠氣象站 WB91vg12
6 hours 12 hours
Attention Low Soil Moisture! Attention

- Crop stress alert based on real-time data
- 5+ different types of alert (i.e. heat, water stress)
- Prevent potential damages & reduce the risks

Crop Growth Stage and Harvest Day Prediction



蜂巢數據科技股份有限公司
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Monthly Report



Overview



旺萊山鳳梨文化園區
PINEAPPLE HILL

Pinapple Default

Copy Link of this Report

Download

複製簡易去識別化報告網址 (Admin)

108年鳳梨栽培區

Time Zone: Asia/Taipei

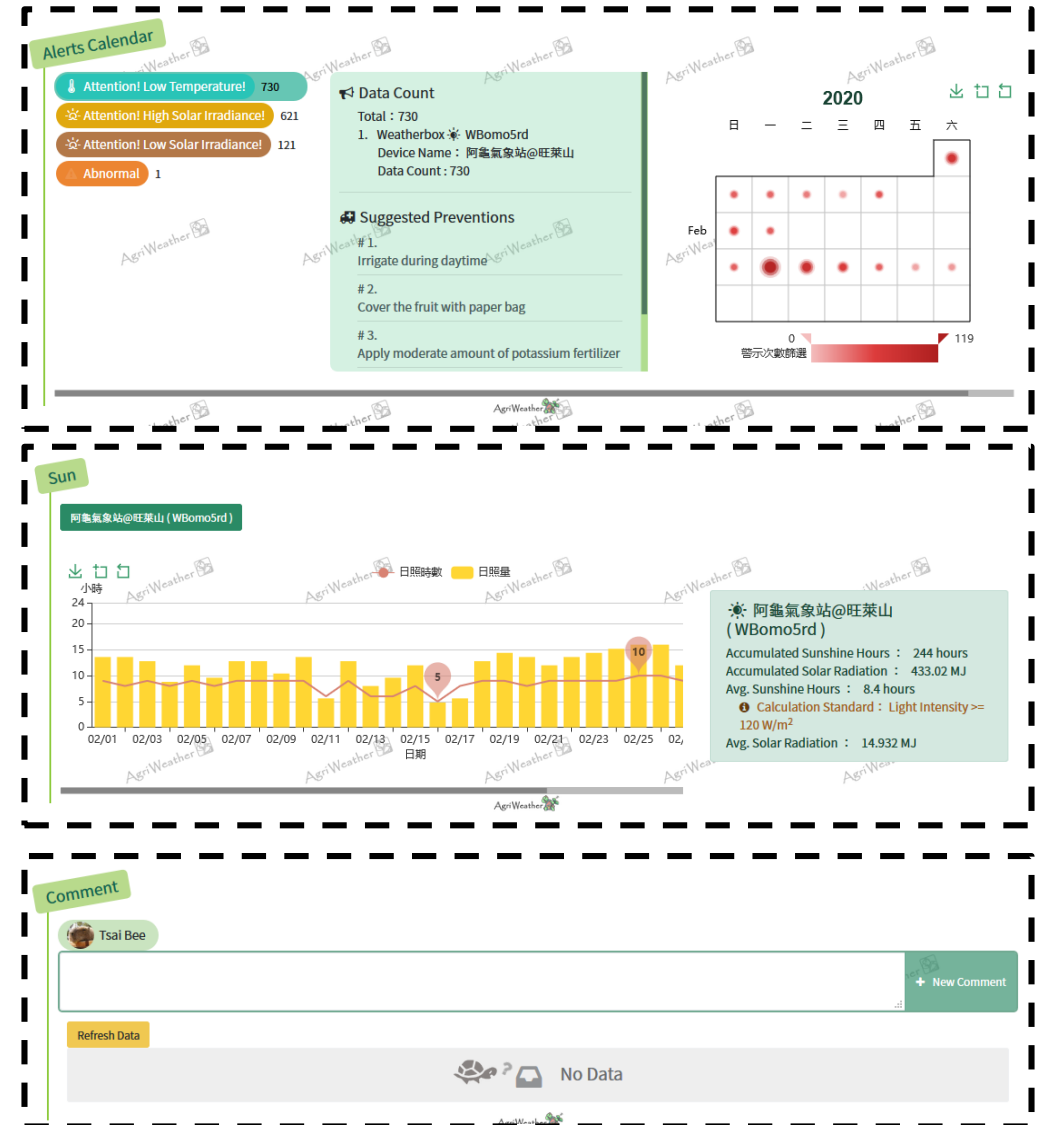
Area: 970.00 m2

Planting Density: 3.92 plants/m2

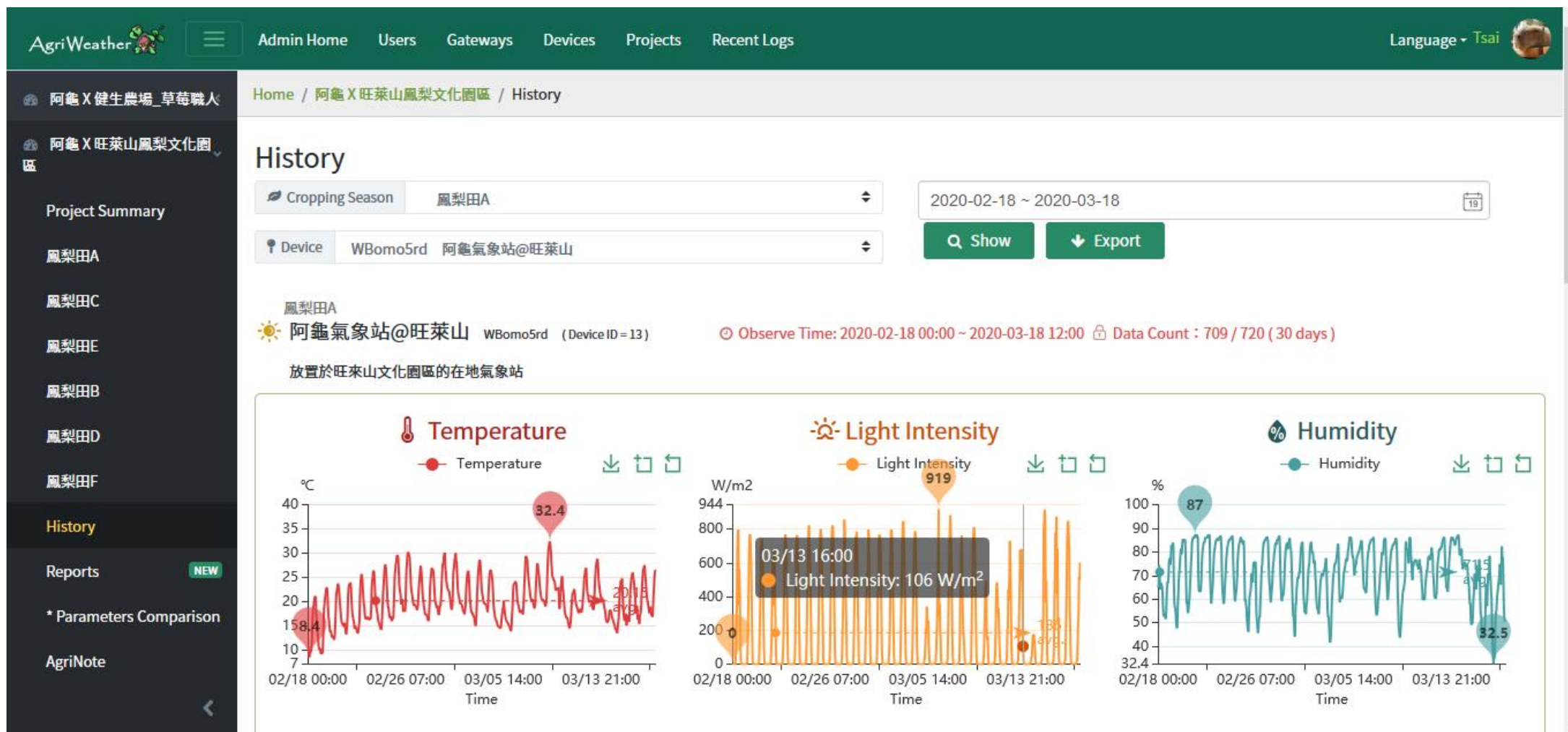
Planting Day: 2018-11-10

Field: 田區A

- Learn the frequency of alerts
- Get summarized data by day & month
- Discuss with experts



Historical Data



- Record filed works, crop traits, diseases & pests

The screenshot displays the AgriDiary web application interface. The top navigation bar includes links for Admin Home, Users, Gateways, Devices, and Projects. The left sidebar contains sections for ADMIN TOOLS, PROJECTS, and LINKS. The main content area shows the 'Field Notes' section with a list of entries. The selected entry, dated 2020-03-03 09:33:50, is titled 'Farming Activity' and includes a photo of a rice field. The photo shows a flooded field with young rice seedlings planted in rows. The interface also features a 'bee Cool' status indicator and a '小麥' (Wheat) label. The bottom of the screen shows a 'Close' button and a 'Updated: 2020-03-03 09:33:52' timestamp.

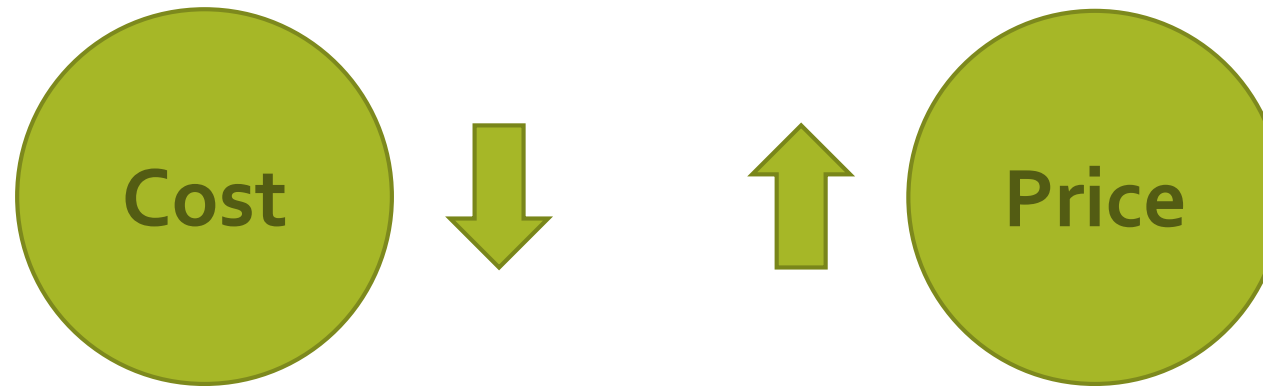
More: our value in different cases

In 2018, AgriWeather successfully keep their client away from chilling damage through real-time monitoring system, and got into the largest supply chain in China, increase 15% of the **selling price**.



(Kaohsiung, The Largest Organic pineapple farm in Taiwan)

Make Right Decision at the Right Time



Choose Plan



Sensing Devices

1. Field Sensor - 3in1 Sensor
(Soil Temperature, Soil Moisture, Electrical Conductivity)
2. Field Sensor - pH Sensor
3. Field Sensor - CO₂ Sensor
4. Air temperature/Air moisture content
5. Illuminance
6. Weather Station (Rainfall, Optical radiation, Sunshine hours, etc.)
7. Agri-Gateway
8. Implementation Fee
9. System Construction/ Integration Testing Fee

Crop Supports



Basic

- ✓ Cropping season Management
- ✓ Real-time Monitoring

100+ Crop Supports



Advanced

- ✓ Crop Stress Alert
- ✓ Crop Stage / Harvest Day Prediction

Now Support

- | | | |
|--------------|--------------|---------------|
| · Pineapple | · Corn | · Cabbage |
| · Tea | · Edamame | · Sugar Apple |
| · Paddy Rice | · Soybean | · Tomato |
| · Wheat | · Guava | · Grape |
| · Peanut | · Strawberry | |

Contact Information

- Riddler Lu

donkeydumb@beehivedt.com

- Official Website

https://agriweather.beehivedt.com/index_en.html