

Announcing OPTiM’s Smart Agriculture Solutions Utilizing AI, IoT, and Big Data to Realize “Smart, Cool, and Profitable Agriculture”

TOKYO, Japan (October 11, 2017) – OPTiM Corporation (TSE: 3694), a leading provider of platform solutions utilizing AI, IoT, and big data, announces new solutions to realize “smart, cool, and profitable agriculture” by using AI, IoT, and big data. These services were highlighted at OPTiM’s booth at the Agri World 2017 Expo held from October 11 to 13 at Makuhari Messe.

1 Field information management service



Agri Field Manager

2 Greenhouse information management service



Agri House Manager

3 Robotics



OPTiM Drone

4 Farm work recording for GAP standards service



Agri Assistant

5 Produce cultivated with OPTiM tech



Smart Yasai

6 Traceability platform using block chain



Agri Block Chain



AI/IoT/Big Data Platform

Cloud IoT OS

Record and manage data for agriculture production, distribution, and sales



Drones

- Crop information
- Pest information
- Soil information
- Location data



Tools

- Vegetation analysis
- Soil analysis
- Crop yield analysis



Sensors Field Servers

- Weather
- Soil information
- Temperature/humidity



Smart Devices Wearables

- Farming information
- Work log
- Images
- Location data



Containers

- Container environment data
- Location data

■ About OPTiM's Smart Agriculture Solutions

OPTiM's smart agricultural solutions utilize AI, IoT, and big data to realize "smart, cool, and profitable agriculture." These solutions include field information management service Agri Field Manager, greenhouse information management service Agri House Manager, robotics OPTiM Hawk, OPTiM Agri Drone, and OPTiM Crawler, a farm work recording app for achieving GAP standards Agri Assistant, produce brand for farms utilizing OPTiM technology called Smart Yasai, and the traceability platform using block chain Agri Block Chain.

■ Details of OPTiM's Smart Agriculture Solutions

◆ Field information management service Agri Field Manager

This service is for managing and analyzing field crops. The AI analyzes images of fields and plants taken by drones or smartphones. This analysis can help make cultivation more efficient by providing results such as pest detection and outbreak prediction.



◆ Greenhouse information management service Agri House Manager

Agri House Manager is to manage and analyze crops that are grown indoors, such as in greenhouses. Numerical data is collected by sensors in the greenhouse, while image data can be collected by a camera attached to OPTiM's land-based robot OPTiM Crawler. All data can be analyzed by AI for predicting yield data, such as crop amounts and ripening periods.



◆Robotics: OPTiM Hawk, OPTiM Agri Drone, and OPTiM Crawler

OPTiM's robotics offerings are fixed wing drone OPTiM Hawk, multi-copter drone OPTiM Agri Drone, and land-based robot OPTiM Crawler. Each can collect images with location data for analysis.

●Fixed wing drone OPTiM Hawk

This fixed wing drone can run digital scans of large areas for extended periods of time. It's ideal for businesses such as forestry and fisheries.



●Multi-copter drone OPTiM Agri Drone

Built on an original frame by OPTiM, this drone can capture images using a multispectral camera for growth analysis, a high-def camera for pest detection, and more. It combines high customizability and maintainability.



●Land-based robot OPTiM Crawler

OPTiM Crawler can improve cultivation efficiency in fields and greenhouses. Add-ons, such as cameras and edge computing devices, can be attached for highly autonomous operation.

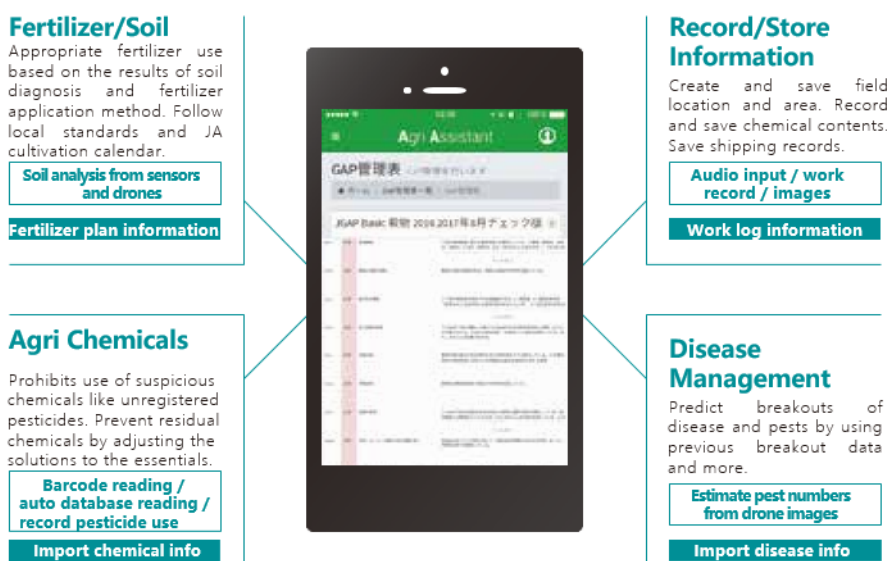


◆Agriculture work record and GAP certification acquisition support service Agri Assistant

Agri Assistant is a service to record all aspects of crop cultivation. It is compatible with smart devices and hearable devices (wireless earphones). The user can share and check any farm work information for obtaining GAP^{※1} certification from any smart device or PC. Also, Agri Assistant is certified by the Japan GAP Association as a JGAP^{※2} recommended system.

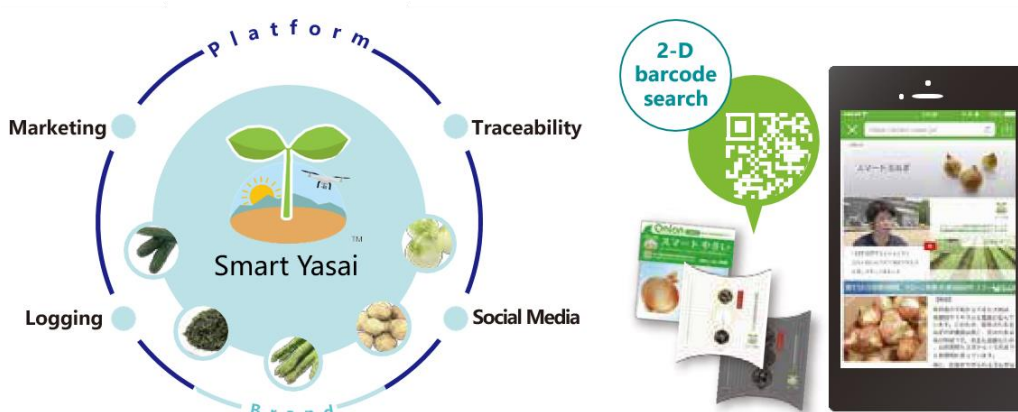


Japan GAP Association Recommended System



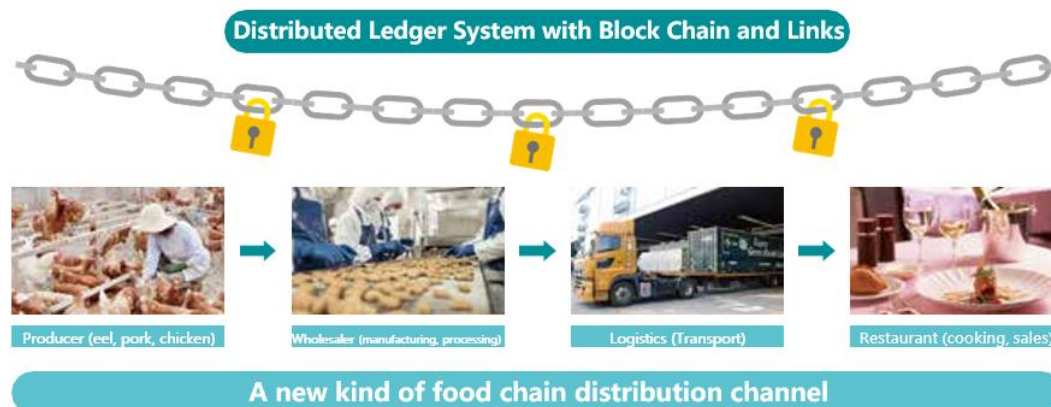
◆Produce cultivated with OPTiM technology Smart Yasai

Smart Yasai is a brand for produce with growth processes powered by AI, IoT, and robots from OPTiM. The information (such as cultivation work history, distribution history, and material procurement history) is managed in a traceability platform called Agri Block Chain. Block chains make it difficult for information to be falsified^{※3}. This secure information management allows users to provide safe and high-value vegetables.



◆Block chain utilizing traceability platform Agri Block Chain

Agri Block Chain (Japanese patent no. 6123039) is a traceability platform utilizing block chain technology owned by OPTiM. With shared management of information such as cultivation work history, distribution history, and material procurement history in a distributed database, Agri Block Chain creates a supply chain that is open, efficient, and reliable.



Please visit the OPTiM Cloud IoT OS website for further information:

<https://en.optim.co.jp/cloud-iot-os/>

※1 GAP: Stands for “Good Agricultural Practice.” It is a set of standards for farmers to follow, such as consideration for the environment, proper user of agricultural chemicals, and quality improvement.

※2 JGAP: Stands for “Japan Good Agricultural Practice.” The Japanese version of GAP. A farm screening and certification system that the Japan GAP Association established to promote uniform standards countrywide.

※3 Distributed ledger technology for distributing data. It creates a network without a central computer, making it difficult to destroy or tamper with.

■ About OPTiM Corporation <http://en.optim.co.jp/>

OPTiM is a leader in internet-based services that improve its clients' interactions with technology in all aspects of everyday life. Its solutions provide comprehensive IoT management and multi-functional remote communication. Its business partners include NTT, KDDI, Canon and Fuji Xerox. Based in Tokyo, Japan, its corporate motto is, "We make the net as simple as breathing."

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