News Release

July 23, 2025
Internet Initiative Japan Inc.
tmsuk company limited
Pulsiv8 Inc.
Koyawata, Inc.

Launching a Pilot Project for Labor-Saving Rice Farming Support Services Utilizing Agricultural Robots, Wireless Communications, AI, and Other Advanced Technologies

-- Establishing a sustainable rice cultivation model that reduces the abandonment of rice cultivation in disadvantageous farmland, such as mountainous terrain --

TOKYO – July 23, 2025 - Internet Initiative Japan Inc. (TSE Prime: 3774, IIJ), tmsuk company limited (tmsuk), Pulsiv8 Inc. (Pulsiv8), and Koyawata, Inc. (Koyawata) today announced to launch a pilot project in June 2025 to develop labor-saving rice farming support services that utilize wireless communications, robots, and other technologies to enable the use of disadvantageous farmland, such as small-scale farms and irregularly shaped farms, in mountainous regions and other difficult-to-farm areas. This pilot project is taking place in the city of Nobeoka, Miyazaki Prefecture, among other locations. This project has been adopted by the Ministry of Internal Affairs and Communications for its Regional Society DX Promotion Package Project (Advanced Wireless System Application Type). The results of this project will be used to promote efforts that support labor-saving rice cultivation in farmland where sustained cultivation is in jeopardy with the goal of contributing to sustainable rice cultivation in mountainous regions.

Background

Due to the recent sharp rise in the price of rice, interest in agriculture — ensuring rice production volume and sustained rice cultivation in particular — has increased. While the aging of farmers and human labor shortages become major issues, farmers are being encouraged to increase the size of their farms and farmland as a means of ensuring rice production volume. At the same time, however, there are many farms and farming areas that are unsuited to large-scale farming. In particular, when it comes to disadvantageous farmland that is small, irregularly shaped, or difficult to access with farming machinery, such as farmland in mountainous regions, it is difficult to improve efficiency and production volume through mechanization and automation. Such farmland often lacks farmers who are willing to take it over, and it becomes abandoned as a result. Under these circumstances regarding the state of disadvantageous farmland, the amount of abandoned farmland (idle farmland) in Japan sits at about 423,000 hectares (according to the 2015 Agriculture and Forestry Census).

This project is developing and testing support services for labor-saving rice cultivation in disadvantageous farmland through the use of wireless communications, agricultural robots, and other advanced technologies. Through this pilot project, it is aimed to establish a sustainable rice cultivation model for disadvantageous farmland that is unsuitable for large-scale cultivation and prevent further increases in abandoned farmland by creating an environment that ensures a certain amount of profit along with labor-saving measures and by working with the local community to procure farmers and to apply new farming methods that can reliably produce results.

Overview of the Demonstration Experiment

For this demonstration experiment, the project team will operate small agricultural robots that can be deployed on small farms, and video footage of its operational status will be transmitted using wireless technologies, such as Starlink satellite communications and Wi-Fi HaLow™.* The robots will be operated and monitored remotely, and a system that can use AI to detect the robots' operational status and nearby hazards will be adopted. The project will verify the system's operation and evaluate the practicality and labor savings for tasks that can be performed by robots in place of human workers. Furthermore, in collaboration with the City of Nobeoka where the project is taking place, the Kitauramachi Agricultural Development Corporation, and Kyushu University, this project will evaluate how well these technologies balance labor savings with crop yields through new approaches to rice cultivation that include double-cropping, dry rice cultivation, and hiring local residents to perform agricultural work.

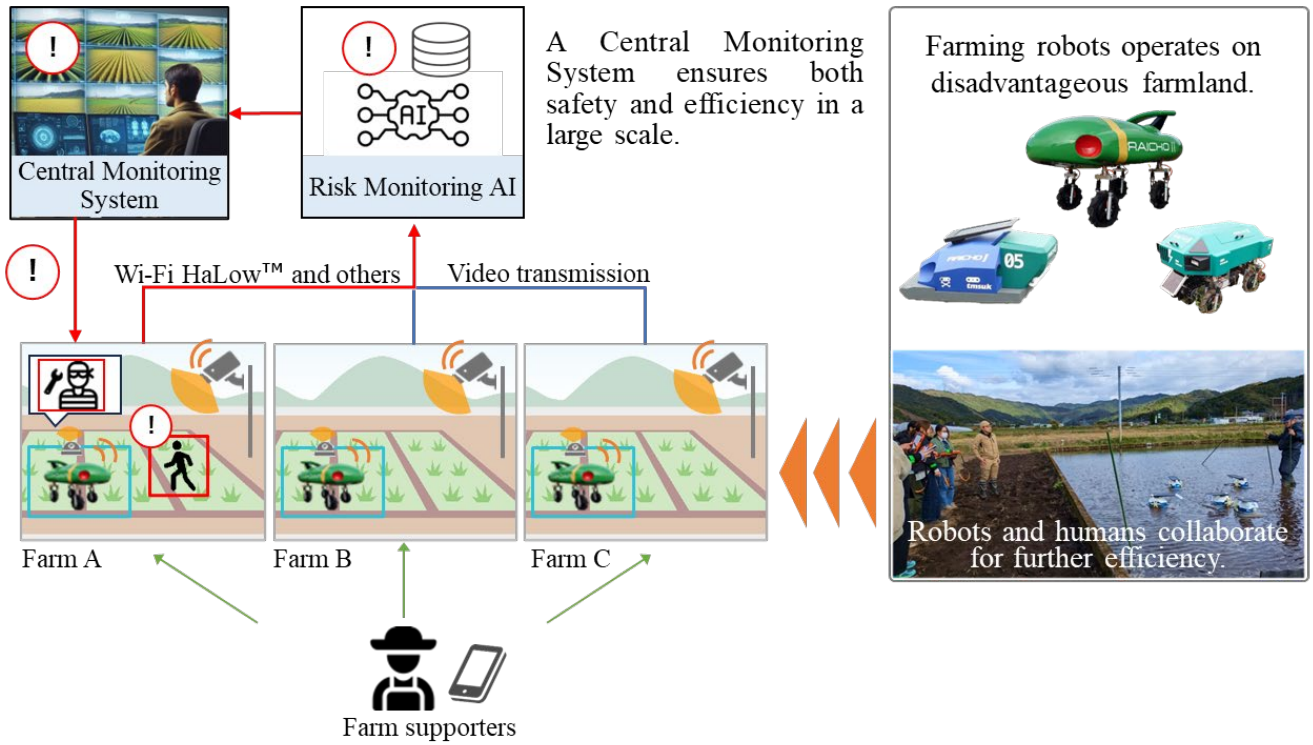
* Wi-Fi HaLow: A Wi-Fi standard characterized by long communication distances, low power consumption, and good radio wave penetration.

Project Overview

Demonstration period	June 2025 – March 2026
Purpose	1. To establish labor-saving rice farming techniques by combining novel cultivation methods with communication technologies, robots, and farmer hiring initiatives 2. Improving the balance of labor savings and crop yields in order to contribute to sustainable rice cultivation in farmland that is located in mountainous regions 3. Developing a service model that can be deployed to areas other than those where the demonstration is taking place
Implementation details	- The project will develop a system for video transmission using Starlink and Wi-Fi HaLow™ at each demonstration location as well as a system for remote operation and monitoring of the robots' operational status. - The project will deploy robots (e.g., harvesting robots) that can be used on small farms in order to evaluate the degree of labor savings and the increase or decrease in crop yields on small farms that use a lot of manual labor and operate at low efficiency. - The project will evaluate whether robot-based labor and manual labor can be used as a means of performing sustainable rice cultivation by outsourcing work to local residents through a job-placement system. - The project will evaluate whether double-cropping, in which rice is harvested twice from a single planting, and the use of dry-cultivation rice, which can be grown in fields and farmland without water, are compatible with labor-saving rice cultivation services from the perspective of labor savings and crop yields. - Based on the analysis data gained through this demonstration experiment, a model for labor-saving rice cultivation support services will be developed and issues related to implementation will be identified.

Implementation framework and company-specific roles	Project leader: - Internet Initiative Japan Inc. overall project control, demonstration planning, and network design and verification) Project members: - tmsuk company limited providing the small farm robots and planning the labor-saving rice cultivation support services - Pulsiv8 Inc. farm monitoring and central control system, advanced wireless network development, and job-placement system - Koyawata, Inc. operating the robot and central control system Project partners: - City of Nobeoka, - Kitauramachi Agricultural Development Corporation - Kyushu University
Verification locations	- Kitaura district, Nobeoka, Miyazaki Prefecture - Kyushu University Experimental Farm, Fukuoka, Fukuoka Prefecture - Mikurube district, Hadano, Kanagawa Prefecture

Overall Structure of the Demonstration System



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