

Hokkaido becomes Japan's launchpad for AI-powered agriculture

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The designation of 19 municipalities in Hokkaido's Tokachi region marks Japan's first national strategic special-zone initiative specifically aimed at AI-powered agriculture, easing rules for autonomous tractors, drones and the infrastructure needed to operate them



Japan is turning one of its biggest farming regions into a test bed for the next generation of agricultural automation, with the government designating 19 municipalities in Hokkaido's Tokachi region, including Obihiro, as national strategic special zones for AI-powered agriculture. The move is significant not simply because it opens the door to more autonomous machinery, but because it tackles one of the less visible barriers to agricultural automation: regulation.

Under the special-zone framework, Japan will ease procedures governing the operation of autonomous robot tractors on public roads and the use of drones for pesticide spraying. The objective is to move AI-enabled machinery beyond controlled fields and into the wider operating environment of commercial farms.

For Japan, where labour availability is a structural constraint on agriculture, the experiment is also a test of whether regulation can catch up with the technology already emerging on farms.

Regulation Moves Closer to the Farm

The problem is particularly acute on large farms in Tokachi. Under existing rules, autonomous robot tractors must have a driver when travelling on public roads, including when moving between a warehouse and a field. When several tractors are deployed across large areas, the requirement effectively puts a person on each machine — limiting the labour savings that autonomous systems are designed to deliver.

The new special-zone rules will allow driverless autonomous tractors to travel on public roads when operating in a convoy with a crewed truck or other vehicle. The government will also ease regulatory requirements for the communications infrastructure required to support uncrewed operations.

That distinction matters. The next phase of agricultural automation is unlikely to be determined solely by whether a machine can operate autonomously in a field. It will depend increasingly on whether farms can integrate those machines into the full logistics chain — from storage and transport to field operations.

Tokachi Becomes Japan's AI Agriculture Test Bed

Tokachi is a logical testing ground for that model, given its large-scale farms and the scope of its agricultural operations. Obihiro Mayor Yosuke Ueno said the region's recognition as a national strategic special zone reflects its suitability as a demonstration site for AI-powered agriculture. A Cabinet Office survey and demonstration project is scheduled to begin later this month, while a symposium is planned in Obihiro in November.

The government is also looking beyond the immediate demonstration projects. By creating a regulatory environment specifically designed for AI-enabled farming, it hopes to attract more technology companies into agriculture and accelerate commercial deployment. This is the first national strategic special-zone designation in Japan specifically focused on AI-powered agriculture.

From Labour Saving to a New Farm Model

Japan has used its national strategic special-zone system before to test agricultural deregulation. In Niigata, for example, an exception was introduced allowing farmers to open restaurants on farmland. But the Tokachi initiative goes further into the technology stack, addressing how machines move, communicate and operate autonomously within the agricultural system. That could make the special zones a useful bridge between agricultural technology development and commercial adoption.

The underlying question is no longer whether autonomous tractors and agricultural drones can perform individual tasks. It is whether farms can redesign operations around machines that require fewer people to supervise them. Mitsugi Takenaka, mayor of Kamishihoro and chairman of an association representing municipalities in Tokachi, said the region could use the special-zone framework to establish a new form of agriculture in a short period and ultimately spread it across Japan and internationally.

For Japan's agriculture sector, the experiment is therefore about more than easing a few regulations. It is an attempt to create the conditions in which AI, autonomous machinery and connected farm infrastructure can operate as one system — and to determine whether that model can scale beyond Hokkaido.