



AGRICULTURAL
TECHNOLOGY
LEADER
CHOOSES
TRIMBLE TO
OPTIMIZE GNSS
HIGH-ACCURACY
POSITIONING
FOR
AUTONOMOUS
SOLUTIONS

Trimble GNSS Technology Tapped to Power Autonomous Robot Tractor

Yanmar Agribusiness leverages the performance and reliability of Trimble's GNSS smart antenna and VRS Now™ corrections to guide its first SMARTPILOT Robot Tractor series.

CHALLENGE

Japan-based Yanmar Agribusiness is a pioneer in cutting-edge technology that provides agricultural machinery and services tailored to the changing times and unique requirements of countries around the world. In recent years, agriculture has faced a range of serious issues, including an aging farming population and reduction in the number of people involved in farm work, while larger global issues such as extreme weather have exacerbated food shortages. As a global innovator, Yanmar's goal is to minimize the burden of heavy labor wherever it can.

As the company prepared to launch its latest endeavor - the SMARTPILOT Robot Tractor series - Yanmar knew it needed a GNSS smart antenna that allowed a stable and reliable position with precise accuracy to ensure its success.

APPROACH

With this in mind, and given Trimble's long-standing experience with agricultural applications worldwide, Yanmar sought out Trimble Nikon to implement VRS Now correction services on the series and utilize the capabilities of the Trimble AX940i Smart Antenna. The goal of the autonomous model was to allow complete autonomous driving capability, powering the Robot Tractor to move straight, go back and forth, turn and operate - all without a human in the seat. The operator is able to monitor on a tablet from a short distance away, making it one of the first completely unmanned and self-driving model tractors.

In addition to Trimble's expertise in precise positioning within the agriculture space, Yanmar's decision to go with the AX940i Smart Antenna was based on its feature-rich components, including the CAN output, serial port and affluent interfaces for WiFi, and Bluetooth for flexible integration and operation.

RESULTS

Since the April 2021 launch of its driverless SMARTPILOT tractor outfitted with Trimble technology, Yanmar has noticed a significant improvement in precision positioning and attitude information. Through the partnership, Yanmar has gained highly accurate positioning that is helping propel autonomy for agriculture applications, backed by Trimble's professional technical support through Trimble's 24/7/365 customer care program.

"The brand name of Trimble has high value as the company is a well-known GNSS pioneer worldwide. We have been delighted at the opportunity to work together on this important project, and partner locally with Japan-based Nikon-Trimble in making this project successful leading up to the mass production stage."

Find out more: www.yanmar.com/global/agri



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