



YANMAR

News Release

December 19, 2018

Yanmar Co., Ltd

Yanmar Launches Precision, High-Density Auto-Rice Transplanter YR8D, A



The YR8D, A utilizes self-driving technology and high-density seedling technology

Osaka, Japan (19th December, 2018) – Yanmar Agri Corporation, a group company of Yanmar Co., Ltd., has developed a diesel-powered high seedling density rice transplanter that utilizes the Group's proprietary autonomous driving technology for straight-line planting and autonomous operation. The technology is expected to simplify rice seedling planting operations and reduce operator fatigue. The YR8D, A, auto-rice transplanter will go on sale from February 1st, 2019 in Japan.

In Japan, recent years have seen a trend towards both consolidation of smaller farms into larger ones, and a fall in farmer numbers together with an aging of the farming population, resulting in labor shortages in agricultural communities. It is hoped that

these shortages can be alleviated by the use of geolocation and automation technologies. Yanmar has added the auto rice transplanter to its line-up to ease the burden of long working hours and allow for highly accurate planting.

The auto transplanter takes its place alongside Yanmar’s existing [auto tractor and robot tractor](#) in Yanmar’s “SMARTPILOT” autonomous driving technology series, utilizing advances in geolocation and related technologies to improve work efficiency and contribute to labor-savings. With a standardized control unit, highly accurate autonomous operation can be realized by implementing a dedicated program for the rice transplanter.

Looking ahead to the future, Yanmar will continue to develop autonomous technology, integrating it into a range of products and services towards developing sustainable agriculture.

■ **Hi density seedling rice transplanter YR 8 D Auto**

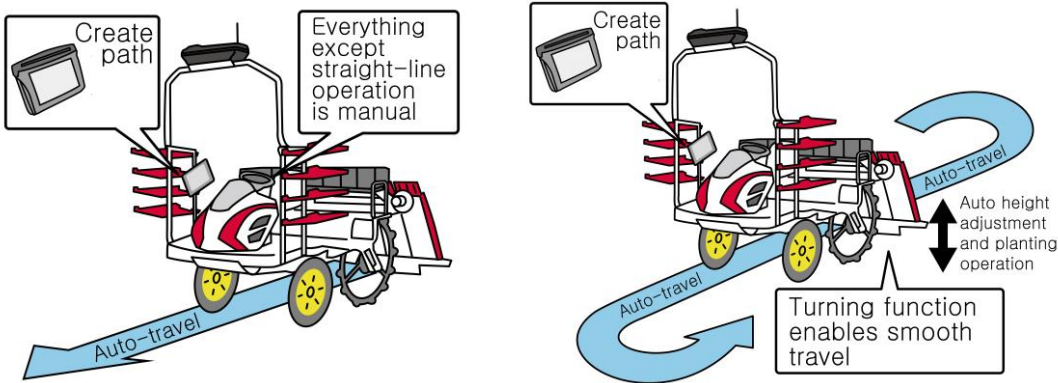
Released: Feb 1st, 2019
Suggested Retail Price: JPY 3,955,000~5,545,000 (before tax)
Sales target: 200 units in the first year (only available in Japan)

■ **Main features**

(1) 2 modes to suit field and operator

In Linear Mode, the transplanter moves forward autonomously, in a straight line with turns handled manually by the operator. In Auto Mode, the equipment not only drives itself in a straight line, but also handles the turns required to plant the field for automated work.

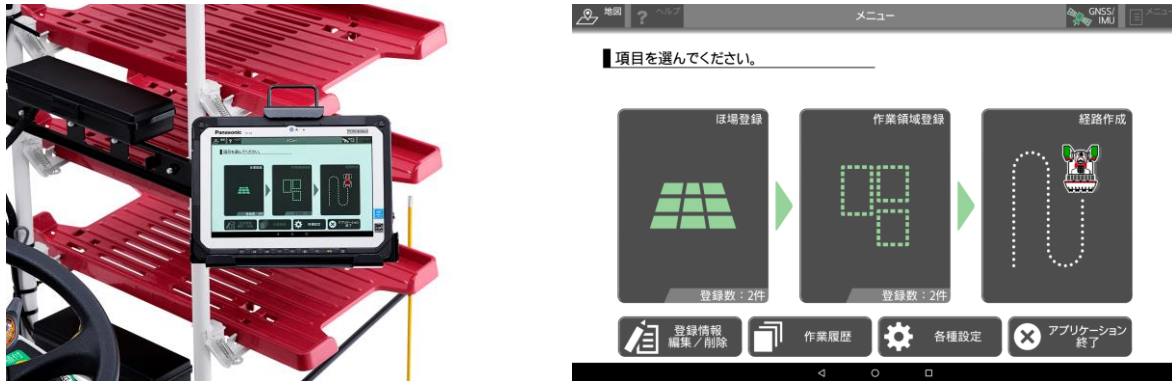
The two modes allow various types of work depending on the skill level of the operator and the conditions found in the paddy.



Linear Mode only (left), and Auto Mode (right)

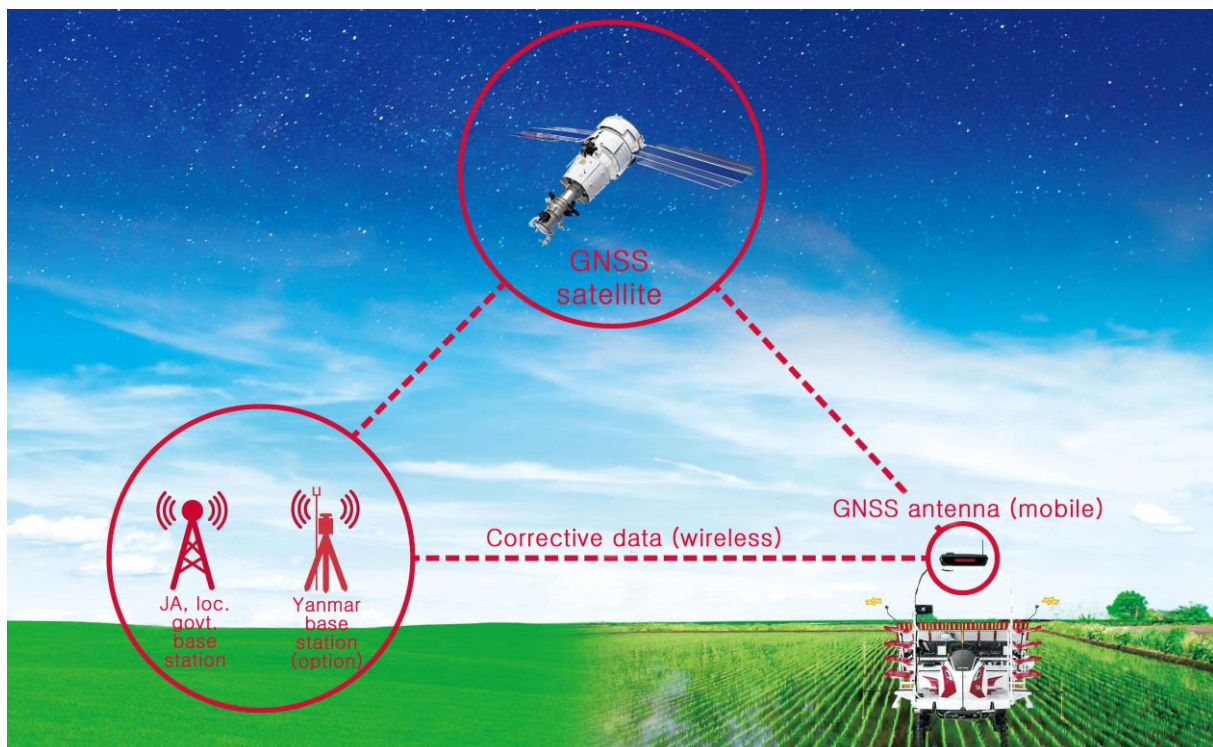
(2) Simple and safe operation via a tablet

A dust-proof and waterproof 10.1-inch tablet displays information about the operating conditions and path of the machinery with easy to understand icons and illustrations, for easy operation.



Operation and settings menus on the tablet

- RTK-GNSS RTK (Real Time Kinematic) sends precise data positioning information from a known point to your tractor by mobile phone or by wireless communication, providing real-time positioning of the tractor. GNSS (Global Navigation Satellite System), GPS and GLONASS are general names for global positioning systems. Users can also optionally utilize a base station to further improve positioning accuracy.



Base station and satellite telemetry is combined to obtain highly accurate GNSS positioning data

(3) Labor-saving synergy from high density seedling technology

Farming with Yanmar's dense seedling technology is carried out in almost the same way as traditional rice transplanting, with the same harvest yields regardless of paddy size, region, and rice variety. Dense seedling technology allows seedlings to be raised in a smaller area with resulting savings in seedling boxes, soil, and the time and labor required to manage the seedling boxes.

Autonomous technology then allows the farmer to realize further labor savings to realize smarter agriculture.



The YR8D,A auto rice transplanter carrying out dense seedling transplanting

<About Yanmar>

With beginnings in Osaka, Japan, in 1912, Yanmar was the first to succeed in making a compact diesel engine of a practical size in 1933. Then, with industrial diesel engines as the cornerstone of its enterprise, Yanmar has continued to expand its product range, services, and expertise to deliver total solutions as an industrial equipment manufacturer. As a provider of small and large engines, agricultural machinery and facilities, construction equipment, energy systems, marine equipment, machine tools, and components, Yanmar's global business operations span seven domains.

On land, at sea, and in the city, Yanmar's mission of "providing sustainable solutions focused on the challenges customers face, in food production and harnessing power, thereby enriching people's lives for all our tomorrows" is a testament to Yanmar's determination to provide us with "A Sustainable Future."

For more details, please visit the official website of Yanmar Co., Ltd.:
<https://www.yanmar.com/global/about/>

<NOTE>

The contents of this news release reflect what was mentioned in the press announcement. Please be aware that the contents of this release may differ with new information and developments.

【Media inquiries】

Public Relations Group, Yanmar Co., Ltd.

E-mail: newsroom@yanmar.com