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HarvestX, an automated strawberry cultivation solution to be provided sequentially from summer 2023

HarvestX, Inc. has developed a new robot, XV3, and will begin offering the HarvestX, automated strawberry cultivation solution in the summer of 2023.

HarvestX is a solution that automates plant management, pollination, and harvesting in the strawberry production process at plant factories to achieve stable production.
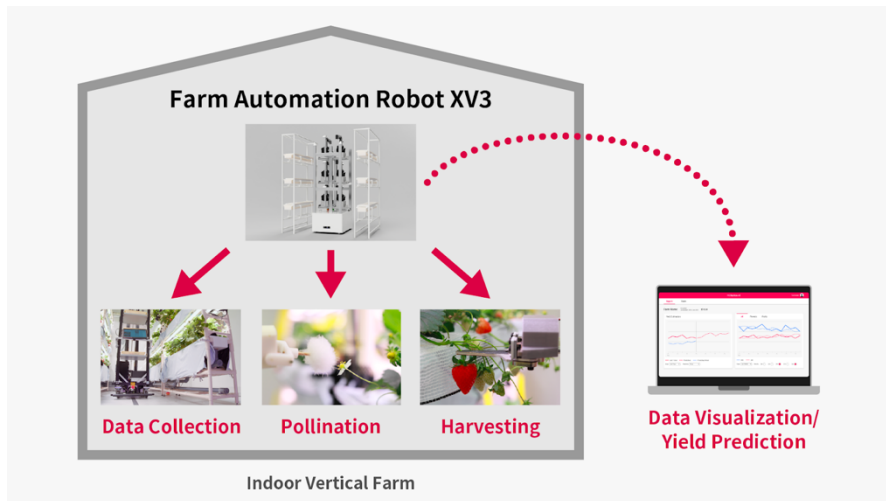HarvestX, Inc. has been developing prototypes of automated pollination and harvesting robots (XV1 and XV2), and has now developed a new robot, XV3, with higher work efficiency than the previous demonstration models. This will enable the development of the HarvestX service, an automated strawberry cultivation solution, which will be available in the summer of 2023.

Features of HarvestX, an automated strawberry cultivation solution

Automated pollination and monitoring with robots and AI realize stable production and cost reduction.

・Automatic pollination, which is 27.8% more accurate than bees(*), reduces the occurrence of malformed fruit and improves fruit yield.

・Improved sanitation in factories by preventing the risk of disease from bee carcasses left unattended and the risk of occupational accidents such as bee stings among workers

・Analysis of seedling conditions based on data collected by the robot makes it possible to predict accurate harvest dates and yields.

*Based on the results of in-house demonstration experiments

Farm Automation Robot XV3

Data Collection Pollination Harvesting

Data Visualization/
Yield Prediction

Indoor Vertical Farm

XV3, a new robot with higher accuracy and scalability

XV3 is the core robot of HarvestX, an automation solution for strawberry plant factories. It has achieved further improvements in the accuracy of automatic pollination and harvesting from the previous demonstration models, as well as a high level of scalability that allows it to be introduced into plant factories in various environments.

The XV3 consists of two parts: the XV3 Cart, which automatically drives around the plant factory, and the XV3 Unit, equipped with sensors for data collection and robotic arms. The previous prototypes had to be custom-designed each time according to the number of shelves in the customer's plant factory. However, the XV3 can freely select the height from 1 to 5 tiers without changing the design of the robot itself, thus enabling the robot to be introduced into various environments in a short period of time. XV3 Units also can be replaced according to the tasks to make them more efficient and meet the needs of different customers.

The new XV3 robot can relieve the shortage of workers in plant factories and significantly reduce labor costs.

XV3 Unit

XV3 Cart
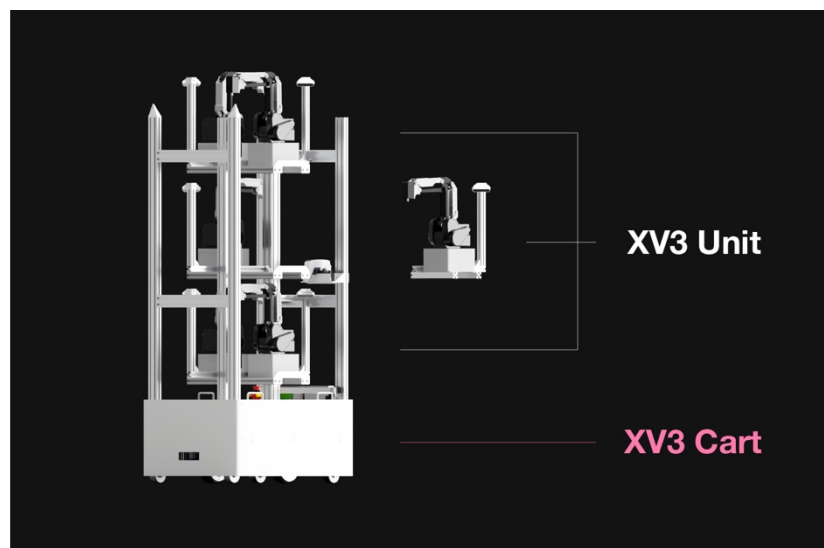
Functions to be offered sequentially from summer 2023

Automatic data collection, pollination, and harvesting functions will be provided sequentially during 2023. In the future, HarvestX will have added cultivation support functions to achieve full automation by 2025.

About HarvestX

HarvestX Inc. is a Tokyo-based company, researching and developing robots for indoor farming. Founded in 2020, HarvestX has focused on pollination and harvesting robots for strawberry production at plant factories. For more information, please visit our website at https://harvestx.jp/en.