First Ag Crop Completely Grown, Harvested Using Only Robots

The world's food chain is headed toward total automation by robotics and AI, potentially putting tens of millions of farm workers out of employment. Technocrats are planning on Universal Basic Income to mollify the unemployables from rebelling. TN Editor

A farm in the United Kingdom is the first in the world to successfully plant, tend and harvest a crop without a single person ever setting foot in the field, according to researchers and developers involved in the project.

From sowing the seeds to picking the grain, human workers were replaced with automated machines operated from a control room. The project, called Hands Free Hectare, was completed last month with a yield of 4 1/2 tons of barley, according to news releases.

The automated farm was a joint venture by Harper Adams University in Shropshire, England, and Precision Decisions, a farming specialist company in York.

“Previously, people have automated sections of agricultural systems, but funding and interest generally only goes towards one single area,” said Kit Franklin, an agricultural engineer on the project.

Experts agree that automation technology has been available for some time now, but in recent years its implementation has been accelerated by decreasing costs and changing demographics in the workforce.

“The rising cost of labor is a huge driver in the field of agriculture technology,” explained Matt Nielsen of Autonomous Solutions, a Utah-based company that converts vehicles from manual to robotic control. “It makes sense when you compare the cost of technology to the cost of labor.”

Harbinger of what’s possible

However, there are limitations still to be assessed. For example, fresh fruits and vegetables are more delicate than sturdy grains and may be more susceptible to bruising in a harvest void of human touch.

There are also social and country-specific considerations. In Japan, for instance, agricultural automation may be a necessity; in India, it could mean unemployment for millions.

“Technically, complete automation is feasible everywhere, but economically and socially it only makes sense in certain situations,” said David Zilberman, a professor of agricultural and resource economics at the University of California, Berkeley.
Nonetheless, the complete mechanization accomplished in the UK is a harbinger of what’s possible in agriculture production, according to experts.

At Hands Free Hectare, agronomists and engineers used customized tractors and drones to cultivate the barley from an area roughly equivalent to two and a half acres.

Drones with multispectral sensors took aerial images of the field, while smaller machines at crop level took samples to assess what fertilizers to apply and where. Live camera feeds were used to detect invasive weeds

or disease.

Earlier this year, the United Nations' Food and Agriculture Organization stressed the need for technological innovation to create alternatives to high-input and destructive farming practices — methods that are unsustainable to meet global food needs, the FAO warned.

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