



**Harper Adams
University**

With its Hands Free Hectare project, Harper Adams University has shown that it is possible to grow a barley crop without a single person being physically present in the field. It impressed the judges as a successful example of sustainability-enhancing “robotic agriculture” and a model of thriving university-business collaboration.

Supported by Innovate UK, researchers worked with Yorkshire business Precision Decisions to create an agricultural system that employed autonomous vehicles and drones along with a wind-based micro-energy installation to run on-site computing equipment.

The aim of Hands Free Hectare was to put robotic agriculture, long discussed, into practice.

The world-first project attracted interest from around the globe, including coverage in Nature and on BBC One’s The One Show. UK government officials took notice, and project leaders reported on the system at conferences as far afield as India. The project proposal was presented as part of researchers’ evidence to a House of Lords committee that autonomous vehicles could help to make crop production systems more efficient and sustainable.

The barley crop was harvested in late summer 2017 – and the grain has been made into an exclusive gin, with a beer to follow.

The judges said that Hands Free Hectare represented a “step change in agricultural practice that demonstrated how technology could be used to benefit humankind. It united established technical concepts for a successful pilot of robotic agriculture. The panel was impressed by the application and by its potential global impact.”