

Future farming

Machinery

Background *26 May 2021*

Slopehelper robot to work year-round in vineyards

Slopehelper is an agricultural autonomous electrical robot that covers the complete annual cycle of operations in vineyards and orchards.

The latest addition to Future Farming's field and harvest robot catalogue with over 35 robots you can buy, lease, or hire in 2021, is Slopehelper from PeK Automotive. It marks the first catalogue entry from Slovenia.

Multifunctional robot

Slopehelper is intended to provide growers with a multifunctional robot for any activity in vineyards and orchards. This ranges from spraying and fertiliser application to trimming, mulching, HV cutting, deleafing and harvesting.



Designed for harsh conditions

The robot is designed to work in harsh conditions with a fully sealed and waterproof body. The vehicle is electrically driven and fully runs on power from lithium batteries providing for up to 14 hours of autonomy on a single charge. It uses differential GNSS and onetime advance geo marking of the field for navigation.

The radar that is used for safety purposes and detecting objects in the row, can also be used to detect ripe fruits and grapes for harvesting purposes. Unique according to its developers, is that Slopehelper is able to autonomously determine the end of the row in vineyards and orchards and perform an autonomous U-turn for the next row.

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Slopehelper can carry tanks, bins/containers (for harvested products), people (for inspection, sorting) and machines and implements. - Photo: Slopehelper

Slopehelper can carry everything

The tracked robot is 2,6 metres long, 1,6 metres wide and weighs 1,600 kilos. It can handle payloads up to 2,000 kilos and can pull 2,000 kilos. It can thus carry tanks, bins/containers (for harvested products), people (for inspection, sorting) and machines and implements. By the end of June 2021, all hinged equipment to cover 90% of the annual cycle of operations in vineyards and orchards will be available to pre-order.

Tracked and stable

Slopehelper runs on two tracks providing it with a relatively low ground pressure. These, and its auto balancing central cargo platform ensure that the centre of mass is always

within the vehicle's dimensions. This enables it to handle slopes in any direction of up to 45 degrees with half the payload at maximum speeds of 10 km/h (6 mph).

With a full payload, the maximum inclination is 40 degrees. It is possible to deactivate auto balancing when Slopehelper fulfils tasks on flat surfaces or when the cargo platform is not used during an operation.

Prices

The robot comes with five different operation modes: autonomous mode, semi-autonomous mode, first person view, visual remote control and follow me mode. The first Slopehelpers will commence their commercial operation in June this year. European farmers can lease the robot or buy it at prices ranging from \$ 73,000 to \$ 160,000.



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