

Precision farming and technology

Solar-powered farm robot has 'simplicity on its side'

- Accurate robot seeds and weeds
- Runs completely on solar energy
- Helps to reduce carbon footprint

A fully autonomous, solar-powered robot capable of precision drilling and weeding is selling well in the UK.

The FarmDroid uses ultra-accurate GPS to record exactly where it places each seed. Then, because it knows where each seed has been planted, the machine weeds around them – keeping crops clean using a combination of hoes and blades.

This approach means the FarmDroid doesn't need banks of high-definition cameras and complex computers to distinguish between plants and weeds. It also means the machine can start weeding before crops have emerged.

James Woolway, managing director of distributor Opico, says simplicity is just one feature that sets the FarmDroid apart from anything else on the market. And because the machine is also solar-powered, there is no fuel bill.

Bottom line

This approach benefits the bottom line at a time when energy markets are volatile and fossil fuels increasingly expensive, says Mr Woolway. It is also environmentally friendly.

"FarmDroid has come up with a unique solution suited to large and small-scale farming systems. Our distribution network, parts and technical teams are more than capable of backing the product up so it's a great fit.

"While it's early days, we're coming to the UK market with a product that is tried and tested. The timing couldn't be better with rising energy costs, labour issues and environmental factors at the forefront of farmers' minds."

Capable of working to within 5mm of each seedling between the rows and 20mm in the row, FarmDroid means there is no need for hand-roguing

problem weeds like fat-hen. Mr Woolway says this in itself represents a saving of more than £250/ha.

Soil health

Weighing just 800kg, FarmDroid has the lightest footprint possible. This means less compaction which is good for soil health. Headlands aren't run down either, helping to maintain yields across the entire cropped area.

Organic growers across northern Europe and the UK have reported using the FarmDroid. They include beet crops as precise seed placement and intra-row weed control encourages uniform crop development.

The FarmDroid concept was the brainchild of Jens and Kristian Warming – two farming brothers from central Denmark – who built the first prototypes with the help of some robotics specialists in their farm workshop.

The machine was launched to the world at Agritechnica 2019. Now located in a state-of-the-art manufacturing complex, the business has more than 250 machines out working across

northern Europe.

Savings in herbicides, fuel, labour and machinery costs make for a strong financial argument for purchasing the FarmDroid, says Mr Woolway. The price and running costs are a fraction of those associated with traditional machinery he adds.

"We believe robotics will form the backbone of the next major step in technological development for agriculture," explains Mr Woolway. "FarmDroid ticks so many boxes in all these respects."

There are other benefits too. Food retailers looking to demonstrate their green credentials are increasingly imposing carbon audits on growers. The FarmDroid is a step towards energy self-sufficiency – and herbicide-free crop production.

The current six-row FarmDroid FD20 retails at £59,500 with an additional £4,243 required for an RTK base station.

Grant funding is likely to be available to assist with the purchase of what is an innovative machine, says Mr Woolway.

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FarmDroid has come up with a unique solution

The robot makes good financial sense, says James Woolway

